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ABSTRACT

The manual considers nutritional issues in disability. Basic nutrition principles are offered in the first section along with a table of sources and functions of nutrients in food. Section 2 considers nutrition factors associated with disabilities, including causes and treatment of obesity and underweight. Implications of diet and feeding patterns on specific disabling conditions (such as cancer, cystic fibrosis, cerebral palsy, and Down's Syndrome) are analyzed. Section 3 focuses on homemaking and feeding problems (such as behavioral problems and physical and attitudinal difficulties). Equipment adaptations are illustrated for food preparation and eating. The final section presents a bibliography on nutrition education that includes textbook references, curriculum guides, and resource and informational manuals. (CL)

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A MANUAL ON FOOD AND NUTRITION FOR THE DISABLED



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A MANUAL ON
FOOD AND NUTRITION FOR THE DISABLED

compiled by

Deirdre Van-Lane
with the assistance of
Donna MacDonald

This manual is reproduced from the original Resource Kit on Food and Nutrition for the Disabled compiled by Deirdre Van-Lane. The kit was a Health Promotion Directorate, Health and Welfare Canada Project (no. 1216-5-255) funded under the Summer Youth Employment Program of Canada Employment and Immigration Commission, 1980.

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FOREWORD

In acknowledging the need for an information resource in the area of nutrition for the physically and mentally disabled, the vast scope of this topic becomes immediately apparent. While nutritionists may be seeking information on feeding aids, teaching methods and behavioral techniques, other health professionals dealing more directly with the disabled may be interested in learning about basic nutrition principles. Parents of disabled children have expressed concern about the role of nutrition in disability and their information needs are becoming increasingly sophisticated.

In order to meet the varied informational needs of those working with the disabled, "Resource Kit on Food and Nutrition for the Disabled" was produced as an introduction to the topic and was aimed at providing both a general overview of the nutrition-related problems of disability and a basic understanding of the role of proper dietary practices and attitudes. The kit consisted of an informational manual together with selected pamphlets and illustrative material. Demand for the resource kit was overwhelming. During the third printing it was decided that the manual would be reprinted with minor revisions and distributed as a separate publication.

The first and second sections of the manual provide background information on basic nutrition, common nutritional problems of the disabled and specific aspects of nutrition in disability. Section three discusses and illustrates some specific feeding problems and the aids and techniques used to minimize the effects of disability. Discussion of consumer self-help skills is also included here. Each of the three sections provides a selected list of references which will enable the reader to locate more detailed information. The fourth section of this manual was specially designed for educators and other professionals who are involved in the education of the physically or mentally disabled and wish to include nutrition education in their program. Books on basic educational theory dealing with the disabled; nutrition education resources, curriculum guides and teaching manuals; and bibliographies and indexes are listed in this section. Parents of disabled children may find some of the resources useful; in particular, many of the cookbooks and manuals provide suggestions for activities which can be undertaken in the home setting.

The pamphlets, booklets and illustrative material included in the original kit have been listed in the fourth section of the manual. A sample copy of most of the pamphlets can be obtained free of charge; details of source and availability are given for each item so that the reader may request individual copies directly from the publisher. Some of these materials were designed for use with specific disabilities, while others are of a more general informational nature. Many resources designed for a general audience can be adapted for use with the disabled individual, but the appropriateness of the resource to the particular individual must be evaluated and adapted by professionals most familiar with each situation.

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1

BASIC NUTRITION PRINCIPLES



BASIC NUTRITION PRINCIPLES

We are often encouraged to follow a "nutritious diet and to eat "good" food, but just what do these phrases mean? Proper nutrition involves receiving the required amounts of energy, protein, vitamins and minerals from the food we eat.

I. Canada's Food Guide

Following Canada's Food Guide ensures that a variety of good foods are consumed each day. The Guide divides foods into four basic groups according to the major nutrients they contain, and states the daily amounts required (Fig. 1).

The milk and milk products group is our major source of calcium, riboflavin, and vitamin D. In fact, this food group is the only dietary source of vitamin D. The body can make vitamin D in the presence of sunlight, but in countries with a climate like Canada's, most people do not get enough sunlight to meet their vitamin D requirements.

Meat and alternatives provide most of our daily protein requirements. They also provide a substantial amount of iron, niacin thiamine, riboflavin and folic acid.

The bread and cereals group is an important source of fibre, carbohydrate, niacin, thiamine, and riboflavin.

Fruits and vegetables provide much of the daily requirements for vitamin A. Citrus fruits are the most important source of vitamin C.

Eating the amounts of food suggested by the food guide provides only 1000 - 1400 calories per day, which is considered inadequate for most adults.¹ According to Canada's Dietary Standard, a 20-year old male with a moderate activity level requires approximately 2800 calories per day and a female in the same age and activity bracket needs about 2100 calories per day.² To increase the number of calories in the diet but still follow the guide, the number of servings and/or the size of servings can be increased.

¹Canada National Department of Health and Welfare.
Canada's Food Guide Handbook, p. 5.

²Canada National Department of Health and Welfare.
Dietary Standard of Canada, p. 14.

II. "Extra" Foods

Some foods are not included in any of the food groups. These foods are high in calories and do not contain significant amounts of important nutrients. "Extra" foods, such as candy, chocolate, soft cheeses, soft drinks, potato chips, butter and alcoholic beverages, are high in fat and/or sugar. These foods are of little benefit in meeting daily nutrient needs.

III. The Function of Nutrients

The nutrients in food are involved in the maintenance and growth of all body systems. Table 1 outlines the various functions of nine major nutrients.

While some nutrients are common to most bodily functions, others are more specific for a particular system. Thus, a variety of foods is recommended to ensure a balanced nutrient intake.

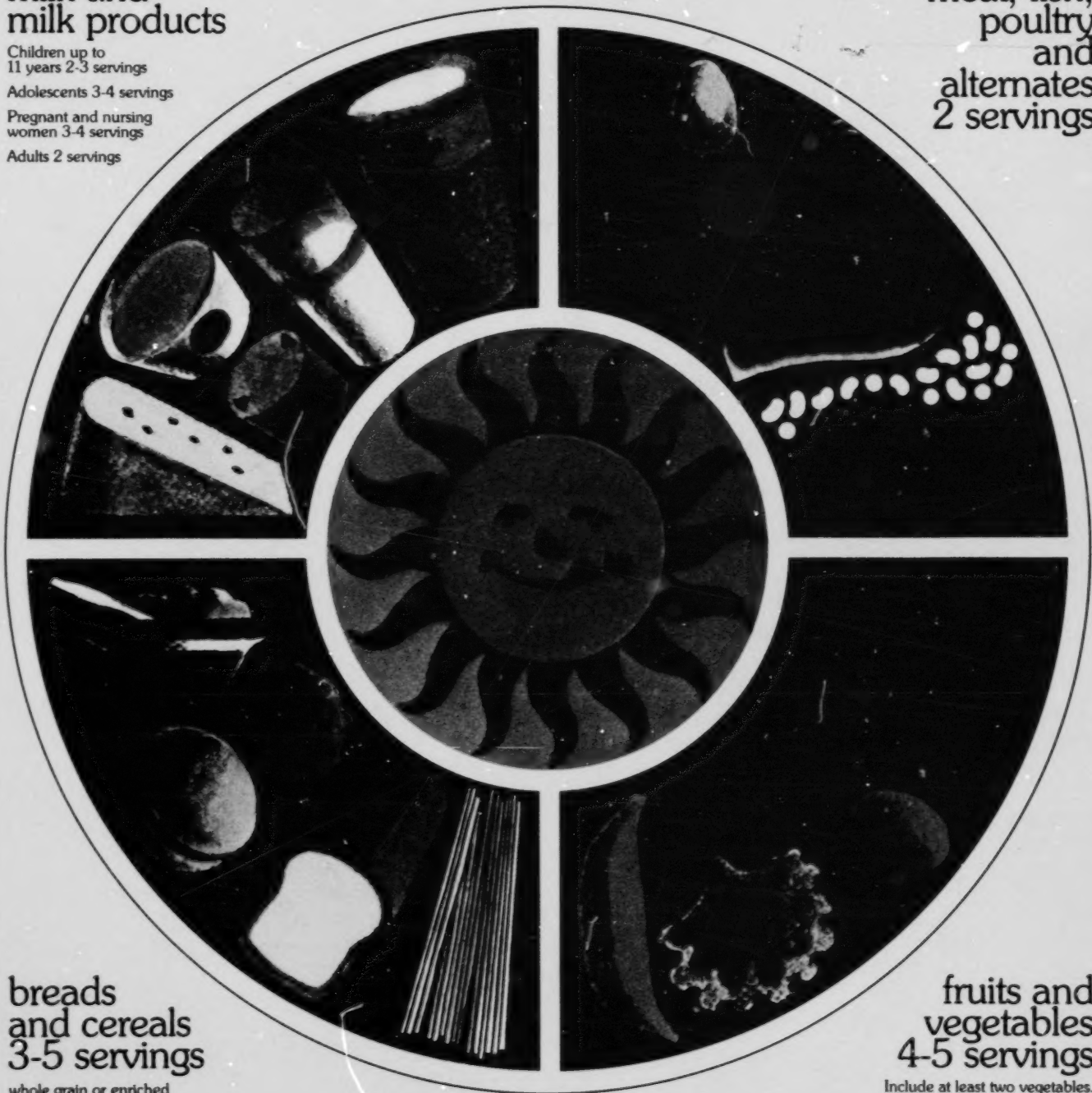
Eat a variety of foods from each group every day

milk and milk products

Children up to 11 years 2-3 servings
Adolescents 3-4 servings
Pregnant and nursing women 3-4 servings
Adults 2 servings

meat, fish, poultry and alternates

2 servings



bread and cereals

3-5 servings
whole grain or enriched

fruits and vegetables

4-5 servings
Include at least two vegetables.



Variety

Choose different kinds of foods from within each group in appropriate numbers of servings and portion sizes.

Energy Balance

Needs vary with age, sex and activity. Balance energy intake from foods with energy output from physical activity to control weight. Foods selected according to the Guide can supply 4000 – 6000 kJ

(kilojoules) (1000 – 1400 kilocalories). For additional energy, increase the number and size of servings from the various food groups and/or add other foods.

Moderation

Select and prepare foods with limited amounts of fat, sugar and salt. If alcohol is consumed, use limited amounts.

milk and milk products

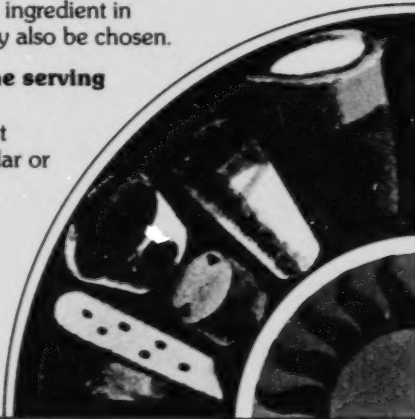
Children up to 11 years	2-3 servings
Adolescents	3-4 servings
Pregnant and nursing women	3-4 servings
Adults	2 servings

Skim, 2%, whole, buttermilk, reconstituted dry or evaporated milk may be used as a beverage or as the main ingredient in other foods. Cheese may also be chosen.

Some examples of one serving

250 mL (1 cup) milk
175 mL (¾ cup) yoghurt
45 g (1½ ounces) cheddar or process cheese

In addition, a supplement of vitamin D is recommended when milk is consumed which does not contain added vitamin D.

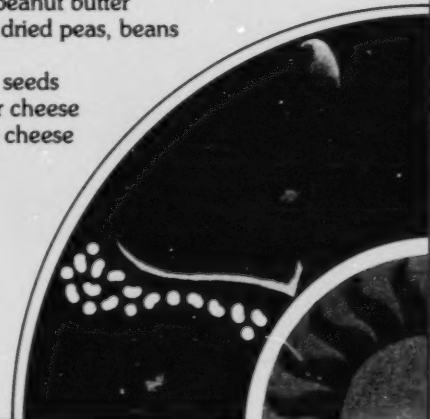


meat, fish, poultry and alternates

2 servings

Some examples of one serving

60 to 90 g (2–3 ounces) cooked lean meat, fish, poultry or liver
60 mL (4 tablespoons) peanut butter
250 mL (1 cup) cooked dried peas, beans or lentils
125 mL (½ cup) nuts or seeds
60 g (2 ounces) cheddar cheese
125 mL (½ cup) cottage cheese
2 eggs



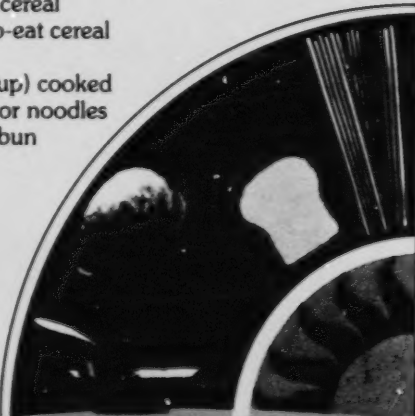
bread and cereals

3-5 servings

whole grain or enriched. Whole grain products are recommended.

Some examples of one serving

1 slice bread
125 mL (½ cup) cooked cereal
175 mL (¾ cup) ready-to-eat cereal
1 roll or muffin
125 to 175 mL (½ – ¾ cup) cooked rice, macaroni, spaghetti or noodles
½ hamburger or wiener bun



fruits and vegetables

4-5 servings

Include at least two vegetables.

Choose a variety of both vegetables and fruits — cooked, raw or their juices. Include yellow, green or green leafy vegetables.

Some examples of one serving

125 mL (½ cup) vegetables or fruits — fresh, frozen or canned
125 mL (½ cup) juice — fresh, frozen or canned
1 medium-sized potato, carrot, tomato, peach, apple, orange or banana

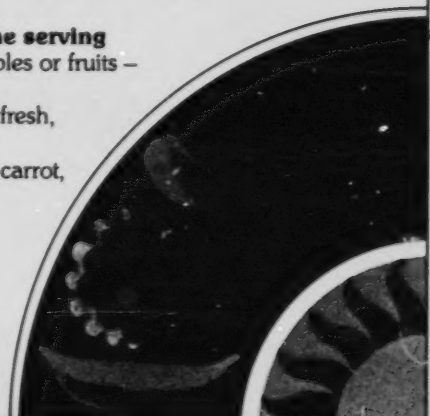


TABLE 1

Sources and Functions of Nutrients in Food

NUTRIENT	FUNCTION	MAJOR SOURCE
Protein	used in growth and repair of body tissues helps body fight infection	meat, eggs, poultry, fish, cheese
Fat	provides energy source of essential fatty acids aids in the absorption of fat soluble vitamins	oils, margarine, butter, meat, whole dairy produces
Carbohydrate	provides energy aids in utilization of fats	bread, cereals, fruit, vegetables
Thiamin (B1)	proper functioning of gastrointestinal tract and nervous system normal growth and appetite	pork, beef, liver, whole and enriched breads and cereals, legumes
Niacin	aids in normal growth and appetite used in functioning of nervous system and gastrointestinal tract	meat, peanuts, beans, peas, enriched grains
Riboflavin (B2)	used in nervous system maintains healthy skin and eyes	milk, liver, kidney, heart, enriched breads and cereals
Folic Acid (B9)	used in formation of red blood cells	liver, kidney, fresh green leafy vegetables, asparagus
Vitamin A	aids in night vision aids in bone and tooth development maintaining health of skin and membrane linings	yellow and green vegetables and fruits, liver, kidney, cream, butter, egg yolk, fortified margarine
Vitamin C	maintains healthy teeth and gums maintains strong blood vessel walls	citrus fruits, tomatoes

Source: Canada. Department of National Health and Welfare.
Health Protection Branch. Selected Nutrition Teaching Aids,
pp. 11 - 13.

IV. Basic Nutrition References

Canada. National Department of Health and Welfare. Health Protection Branch. Canada's Food Guide Handbook. Ottawa: Queen's Printer, 1979.

Canada. National Department of Health and Welfare. Health Protection Branch. Dietary Standard for Canada. Ottawa: Queen's Printer, 1975.

Canada. National Department of Health and Welfare. Health Services and Promotion Branch and Health Protection Branch. Nutrient Value of Some Common Foods. Ottawa: Queen's Printer, 1979.

Canada. National Department of Health and Welfare. Health Protection Branch. Selected Nutrition Teaching Aids. Ottawa: Information Canada, 1976.

2

NUTRITION in DISABLING CONDITIONS



I. COMMON DIETARY PROBLEMS OF THE DISABLED

There are several dietary problems which are prevalent among disabled persons. Obesity, underweight and constipation represent three major areas of concern.

A. Weight Control

Body weight is determined by the balance of energy input and energy output. Input represents the food consumed; output represents the energy expended in daily activities and basic bodily functions. Energy is required for our basic bodily functions such as circulation, digestion, respiration, movement and elimination. The amount of energy required to maintain these functions is known as the basal metabolic rate; usually 50³70% of daily caloric requirements for a sedentary person. The caloric needs of an individual confined to bed would not be much greater than his/her metabolic rate. The individual manoeuvring in a wheelchair, using more energy in daily activities, would require more calories than the person confined to bed.

The following equations summarize the three possible states of weight control:

ENERGY INPUT > ENERGY OUTPUT = WEIGHT GAIN

ENERGY INPUT = ENERGY OUTPUT = NO CHANGE

ENERGY INPUT < ENERGY OUTPUT = WEIGHT LOSS

Weight loss will be achieved when energy input is less than energy output, and weight gain requires that energy input is greater than energy output.

The appropriate weight for an individual is determined according to their body frame, height, sex and age. Height - weight charts can be useful in defining weight problems, but should be used only as a guide (Table 2).

³Marie V. Krause and L. Kathleen Mahan. Food, Nutrition and Diet Therapy, p. 27.

TABLE 2 Desired Weights for Those Age 25 and Over
 With a Medium Frame

MEN		WOMEN	
Height (1" shoe)	Weight (pounds)	Height (2" shoe)	Weight (pounds)
5'2"	118-129	4'10"	96-107
5'3"	121-133	4'11"	98-110
5'4"	124-136	5'0 "	101-113
5'5"	127-139	5'1 "	104-116
5'6"	130-143	5'2 "	107-119
5'7"	134-147	5'3 "	110-122
5'8"	138-152	5'4 "	113-126
5'9"	142-156	5'5 "	116-130
6'0"	146-160	5'6 "	120-135
6'1"	150-163	5'7 "	124-139
6'2"	154-170	5'8 "	128-143
6'3"	158-175	5'9 "	132-147
6'4"	162-180	5'10"	136-151

Source: National Dairy Council. Weight Control Source
 Book, 1975.

1. OBESITY

The Nutrition Canada Survey (1972), revealed that 42% of the young adult population and 61-65% of the middle aged population were at high nutritional risk due to obesity.⁴

As a disability may restrict physical activity, it can be difficult for the handicapped individual to maintain a desirable weight. Hence, fewer calories are required by disabled persons than for non-handicapped individuals of comparable height and weight.

In many cases, handicapped children are overfed by their parents in an attempt to compensate for the disability, in the misguided belief that eating is one of the few pleasures the child can find in life. However, obesity just adds to a disabled child's problems, both physically and emotionally.

Maintaining a proper weight leads to a pleasing appearance which will enhance self-image. A positive self-image is an important asset in dealing with any limitations imposed by a disability.

Just as importantly, there are medical problems which accompany overweight. Obese individuals have an increased risk of developing diabetes, high blood pressure, gall bladder problems, and cardiovascular disease. Conditions such as multiple sclerosis, arthritis and Parkinson's Disease are aggravated by excess weight. It is more difficult to help individuals who require assistance in moving if they are overweight.

Weight loss can be accomplished in three ways: energy input can be decreased; energy output can be increased; or a combination of both may be used. When possible, the combination approach is probably easier as the food restrictions are less severe.

(a) Energy Output - Physical Activity

Increased activity is a very real possibility for many disabled persons. Organized sports can prove rewarding for those with sufficient motivation. The Olympics for the Disabled have indicated that a physical handicap is not necessarily a barrier to athletic achievement. If one is not inclined towards record-breaking endeavours, a moderate amount of exercise can still be both enjoyable and beneficial. Those confined to a wheelchair can still do arm, chest and neck exercises. Lifting arms overhead or bending the knees while confined to bed are also beneficial forms of exercise.

⁴ Canada. National Department of Health and Welfare. Nutrition Canada National Survey, pp. 85, 86, 91, 94.

(b) Energy Input - Diet

In considering the energy input side of the equation, food intake must be decreased in order to lose weight. There are many diets which claim that there are "magic foods" which will help us lose weight: examples include the grapefruit diet, the zen macrobiotic diet, the banana diet, and the ice cream diet. All of these diets concentrate on eating one particular food. Unfortunately, such "fad" diets do not work and often jeopardize health because essential nutrients are not included. The individual trying to lose weight still has the same nutrient needs. The key is to get all the necessary nutrients while consuming fewer calories. This means that foods considered "extras" should not be included in the diet. If this seems too stringent for a particular individual, restrictions can be modified to suit individual needs. If "extras" are permitted, weight loss will not be as rapid. However, a slower rate of weight loss is preferable to a diet that is impossible to keep. "Extra" foods are often garnishes or other pleasant additions to a meal. Table 3 gives examples of low calorie alternatives.

To ensure adequate nutrients with a minimum of calories, follow Canada's Food Guide by choosing the lower calorie choices in each group. Some examples of good low-calorie choices follows:

- in the milk and milk products group, choose skim milk and skim milk products rather than whole milk and whole milk products. Use plain yogurt with fresh fruit. The commercial yogurts which contain fruit have added sugar and calories (Table 4).
- good choices in the meat and alternates group are fish, poultry, and eggs. Meats should be lean and prepared by broiling, roasting, or baking instead of frying. Trimming off visible fat from meats will reduce calories (Table 5).
- the best low-calorie choices in the fruit and vegetable group are those without added sugar - raw, packed in their own juice or water. A baked potato contains several nutrients and only a few calories. French fries have almost twice as many calories and nutrients are lost during the peeling, cutting and frying process (Table 6).
- Low calorie choices in the bread and cereals group include unsweetened cereals, bread, rice and pasta. Muffins and cookies, even when made with whole grains, contain the added calories from sugar.

Many of the obstacles to successful weight loss are psychological. High-calorie foods are often those thought of as treats or rewards. Part of the success in overcoming obesity is to learn to appreciate flavors other than sweetness. Experimenting with different low-calorie foods and preparing them in an attractive manner can help change food habits. Although the process is difficult, the physical and emotional benefits of weight loss are tremendous.

TABLE 3 Low-Calorie Substitutes for Some Typical "Extra" Foods

Common Extra Foods	Nutritious Low-Calorie Alternatives
Sour cream or cream sauce	Plain yogurt
Butter or Hollandaise sauce on vegetables	Lemon juice or herbs on vegetables
Mayonnaise or oil dressing	Buttermilk or tomato juice dressing
Gravy	Meat broth or juices with fat removed
Deep fat fried batters for meat, fish, poultry	Oven baked breadings for meat, fish, poultry
Butter or margarine on bread or toast	Cheese spread, liver pate, peanut butter can be used without first buttering the bread
Yogurt with sweetened fruit	Unsweetened, undiluted frozen orange juice as yogurt topping. Fresh, unsweetened fruit
Sugar glaze for baked ham, squash or sweet potatoes	Fruit glaze for baked ham, squash or sweet potatoes
Sugar on cereal	Fruit on cereal
Syrup on pancakes	Fruit or yogurt on pancakes

Source: Canada. Department of National Health and Welfare. Health Protection Branch Canada's Food Guide Handbook, p. 34.

TABLE 4 Caloric Variation in Different Forms of Milk and Yogurt

	<u>Calories</u>
<u>MILK</u> - 250 ml	
Whole	157
2%	129
Skim	90
<u>YOGURT</u> - 125 g	
Fruit Flavoured	128
Plain	85

TABLE 5 Caloric Variation by Method of Preparation in Beef, Fish

<u>Food</u>	<u>Calories</u>
Sirloin Steak, broiled - 90g	
fat and lean	318
lean only	165
Cod - 90g	
fried in butter	229
broiled	153
Chicken - 90g	
fried	182
roasted	122

Source: Canada. Department of National Health and Welfare. Health Services and Promotion Branch and Health Protection Branch. Nutrient Value of Some Common Foods, 1979.

TABLE 6 Caloric Variation in Different Forms of Potatoes and Peaches

Food	Calories
Potatoes, 57g	
french fried	155
potato chips	115
baked	52
Peaches, 250ml	
canned in heavy syrup (250 ml)	211
water pack (250 ml)	79
raw (1 medium)	68

Source: Canada. Department of National Health and Welfare. Health Services and Promotion Branch. and Health Protection Branch. Nutrient Value of Some Common Foods, 1979.

ii. UNDERWEIGHT

It may seem paradoxical that another common problem among the disabled is that of being underweight. This problem most often occurs in those with athetoid cerebral palsy and is due to the many involuntary movements that are characteristic of this disorder. While a non-disabled 17 year old male would require approximately 3000 calories per day, a male of this age with athetoid cerebral palsy could require up to 6000 calories per day.⁵ Consuming the required number of calories is made more difficult as eating problems often accompany this disability.

Underweight is also a common problem in cancer patients, but this is due to a lack of appetite. It is not always practical to make up the extra calories by attempting to convince the individual to eat more food, as weight gain is difficult when eating is a chore and appetite is poor.

When eating problems or poor appetite exist, foods must be chosen carefully to ensure that nutrient needs are being met. Obtaining the extra calories from highly sugared foods can promote tooth decay. Selecting high-calorie, nutrient-rich foods will ensure a healthy pace of weight gain. Basically, the individual trying to gain weight can eat all the foods in the four food groups that the dieting person should avoid.

(a) Increasing Caloric Intake

Calories can be added to meals in a number of ways. The use of whole milk and whole milk products instead of skim will increase the number of calories in the diet. Cream sauce can be served on meat and vegetables. Melted cheese on vegetables, meat and in casseroles will provide extra calories. Powdered or liquid milk can be added to casseroles. Cook vegetables in milk rather than water. High-calorie garnishes such as nuts, hard boiled eggs, deviled eggs and dried fruit can also be used.

(b) Encouraging Eating

When underweight is a problem, an attempt to increase appetite will often have to be made. Nutritious high-calorie foods are of no benefit if they are left on the plate.

The atmosphere surrounding a meal, and the attractiveness of the food can both affect appetite. Colour combinations are important. A plate of fish, turnip and potatoes is drab and colourless when compared to a plate with fish, squash and broccoli. Garnishes with bright colours can be used to add attractiveness to a meal, and a pleasant table setting will enhance the atmosphere.

⁵ National Cystic Fibrosis Foundation. A Guide to Diagnosis and Management of Cystic Fibrosis. p. 70.

ii. UNDERWEIGHT (continued)

(b) Encouraging Eating

Avoiding arguments and stress before and during a meal helps to create a more relaxed and pleasant mealtime. If an individual is not feeling well, there is no benefit in nagging them to eat. Attempting to force feed may result in a permanent dislike of a particular food. Wherever possible, foods that the person likes should be served.

E. Constipation

Another dietary problem which occurs regularly among disabled persons is constipation.

i. Causes

There are two basic causes of constipation among the disabled, a lack of activity, and the consistency of the diet. Where eating or feeding problems are very severe, the individual will be on a pureed diet. Foods are mixed with liquid and liquified in a blender, and such a diet will lack in fibre. Fibre is the indigestible part of foods which promotes regular bowel movements. Both exercise and diet can aid in overcoming constipation. Laxatives are not a good solution because they can create a dependancy wherein bowel movements will not occur with natural stimuli.

ii. Some Solutions

When the capability to exercise is limited due to a disability, diet alone can be used to promote regularity. Plenty of liquid along with high-fibre foods are necessary. It is generally suggested that 6-8 glasses of liquid be consumed each day.⁶ A high-fibre diet is beneficial for anyone suffering from constipation, even if they are not on a pureed diet.

Foods that are high in fibre include whole grain breads and cereals, raw fruits and vegetables. Eating the whole fruit or vegetable, including the skin, will also provide additional fibre. Table 7 lists the fibre content of some common foods. The fibre content of pureed foods can be increased by using high-fibre foods in the mixture and adding bran.

Through the application of the basic nutrition concepts presented in this section, the disabled individual can avoid some of the common dietary problems often evident in this population group.

⁶Richard Sweet. A Manual for Patients with Parkinson's Disease, p. 5.

TABLE 7 Fibre Content of Some Common Foods

Food	Measure	Fibre (g)
White Bread	1 slice	0.8
Whole Wheat Bread	1 slice	1.5
Corn Flakes	200 ml	0.3
Puffed Corn	250 ml	0.1
Rice	250 ml	1.4
Oatmeal	250 ml	3.2
Bran	15 ml	2.2
Peanut Butter	15 ml	1.2
Peanuts, roasted	125 ml	5.9
Almonds, shelled	125 ml	10.7
Split peas, cooked	250 ml	13.4
Banana	1 medium	6.0
Apple	1 medium	2.2
Orange	1 medium	3.6
Peach	1 medium	1.6
Grapefruit	$\frac{1}{2}$ medium	0.7
Celery	1 stalk	0.5
Carrot	1 medium	0.5
Cauliflower	250 ml	1.9
Green pepper	1 medium	1.0
Potato, baked	1 medium	3.2
Potato, mashed	250 ml	1.9

Source: Canada. Department of National Health and Welfare. Health Services and Promotion Branch and Health Protection Branch. Nutrient Value of Some Common Foods, p. 33.

C. COMMON DIETARY PROBLEMS OF THE DISABLED - REFERENCES

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II. NUTRITION IN DISABLING CONDITIONS

Sufferers of incurable, disabling conditions are often misled by faulty claims of dietary cures for their disabilities. Arthritis sufferers alone spend nine hundred and fifty million dollars a year on useless remedies, many of which are dietary.⁷

Numerous diets have been suggested for the cure of multiple sclerosis. Low-fat, high-fat, gluten-free, high-magnesium, high-vitamin and raw food diets have all been promoted but never proven.

A. Conditions with Dietary Implications

Gout, cancer, and cystic fibrosis are three disorders which involve dietary implications.

i. GOUT

Gout is the one disabling condition which can be controlled by diet. This disease is a type of arthritis manifested by painful attacks in the joints, and is caused by high levels of uric acid in the body. Contrary to popular belief, gout is not caused by eating rich food, nor does it always occur in the big toe. However, it is most often found in people who are more than 20 pounds overweight. Gout cannot be cured, but it can be completely controlled by drugs and diet.

The diet for gout is low in fat and restricted in foods containing large amounts of uric acid. Alcohol is forbidden as it seems to increase the prevalence of attacks. Certain foods, including organ meats, must be avoided, and others, such as ice cream, can only be eaten sparingly. Gout patients will have received copies of the required diet from their doctor (Table 8).

ii. CANCER

Cancer treatment may alter desire and ability to eat. Radiation treatment to the abdomen can cause vomiting, nausea, and diarrhea. Radiation in the head, neck, or chest area can cause painful swallowing. Chemotherapy (drug treatment) may cause nausea, vomiting, diarrhea or constipation.

When nausea and vomiting are problems, dietary patterns should be arranged so that individuals have the opportunity to eat larger amounts when they feel at their best. Low-fat, dry foods are usually the best tolerated by the nauseated person. Greasy, spicy or strong-smelling foods should be avoided.

⁷The Arthritis Foundation. Arthritis: The Basic Facts, p. 24.

TABLE 8 Foods High in Uric Acid

Type of Food	Foods to Avoid	Eat Sparingly
Beverages	Alcohol	
Bread and Breadstuffs		Pumpernickel Whole Wheat Graham Bread Graham Crackers Whole-Grain Cereals Shredded Wheat Whole bran Puffed Wheat
Dairy Products		Butter Oleomargarine
Desserts		Ice Cream Pastries Pie
Meat	Anchovies Brains Clams Duck Goose Kidneys Meat Extracts Pheasant Pigeon Pork Rabbit Sausage (pork) Scallops Scrapple Shellfish Shrimp Squab Sweetbreads Tongue	Bacon Beef Bologna Chicken Crabmeat Fish (other than those listed) Frogs Legs Ham Herring Lamb Salmon Tuna Turkey

... (con't)

TABLE 8 Foods High in Uric Acid (con't)

Type of Food	Foods to Avoid	Eat Sparingly
Vegetables		Asparagus Kidney Beans Lima Beans Navy Beans Cauliflower Mushrooms Onions Peas Spinach
Miscellaneous	Gravy Meat Soup	Nuts Bouillon Cream Soup Peanut Butter Mayonnaise French Dressing Russian Dressing

Source: Darrell C. Crain, The Arthritis Handbook, 1971.

ii. CANCER (continued)

Diarrhea is combatted by a full-liquid diet and foods high in potassium to replace lost minerals. Some high-potassium foods include bananas, mashed potatoes and peach or apricot nectars. Low-fibre foods should be used. (Table 9).

Constipation is relieved by consuming high-fibre foods and increasing liquid intake.

These dietary measures can help lessen the side effects of cancer treatment.

iii. CYSTIC FIBROSIS

The nutritional impact of cystic fibrosis is made obvious by the fact that children with untreated cystic fibrosis often died of malnutrition. Cystic fibrosis leads to large increases in dietary requirements due to problems with the digestion and absorption of food.

Due to incomplete digestion of food and subsequent fecal losses, individuals with cystic fibrosis have large appetites.

Diets differ according to an individual's tolerance to specific foods. In general, there is a 50 - 100% increase in caloric requirements, whereas the amount of protein needed increases by two to two-and-a-half times.⁸

Protein is difficult and expensive to obtain in a non-food form, while it is possible to obtain vitamins and minerals from pills. Since carbohydrates are the easiest substances to digest and fat the most difficult, the amount of fat in the diet must be restricted according to individual tolerance.

Among those with cystic fibrosis, the daily requirements for fat-soluble vitamins increases two-fold.

⁸ National Cystic Fibrosis Research Foundation. A Guide to Diagnosis and Management of Cystic Fibrosis, p. 70

TABLE 9 Low Fibre Foods

Type of Food	Low Fibre Choices
Beverages	coffee, tea, milk drinks, carbonated beverages, fruit flavoured drinks
Breads	french, vienna, refined whole wheat, white & rye without seeds, crackers, biscuits, french toast
Cheese	cottage, cream, American, Swiss, muenster, other mild flavours
Eggs	poached, scrambled
Fruit	juices, nectars, canned or cooked fruit, peeled fruit without seeds, apples, apricots, avocados, bananas, cherries, grapefruit, oranges, tangerines, fruit cocktail, grapes, melons, cantaloupe, honeydew, peaches, pears, pineapples, plums
Meat, Poultry, Fish	baked, broiled or stewed beef, ham, liver, lamb, poultry or veal
Milk & Milk Products	buttermilk, chocolate, skim, and whole milk, yogurt
Potatoes, Rice & Pasta	boiled, creamed, mashed, scalloped, baked white or sweet potatoes without skin, macaroni, noodles, white rice, spaghetti

.... (con't)

TABLE 9 Low Fibre Foods (con't)

Type of Food	Low Fibre Choices
Vegetables	canned or cooked asparagus, beans, beets, carrots, mushrooms, peas, pumpkin, squash, spinach, tomatoes, turnip greens, tomato juice
Miscellaneous	ground or finely chopped herbs & spices, salt, flavouring extract, catsup, chocolate, mild gravy, white sauce, soy sauce, vinegar

Source: United States Department of Health and Human Services. National Cancer Institute. Diet and Nutrition: A Resource for Parents of Children with Cancer, 1979.

B. Conditions With Feeding Problems

Eating and feeding difficulties involve problems in sucking, biting, swallowing and chewing, or in getting food from plate to mouth. These types of problems occur with cerebral palsy, Down's Syndrome, cleft lip and palate, or with any condition which affects arm movement.

i. CLEFT LIP AND/OR PALATE

The child with cleft lip and/or palate may have problems in sucking. The techniques and devices used to overcome these problems are discussed in Section 3. However, there are also some nutritional consequences involved with this particular disability.

With a newborn baby, the question of breastfeeding arises. Breastfeeding has many advantages over bottle feeding and should be encouraged. However, it may be difficult to breastfeed the baby with this disability. Each infant is different and the ability to breastfeed depends on the severity of the cleft. The mother should consult a pediatrician about the feasibility of breastfeeding.

These children are often kept on liquid diets. However, progression to solid foods should occur at the same rate as for other children, as chewing food helps to develop the muscles required for speech.

Some solid foods may cause problems by becoming lodged in the cleft in the roof of the mouth. Foods which are likely to cause this problem include nuts, peanut butter, cooked cheese dishes, leafy vegetables, fruit peels and creamed dishes. If any of these foods cause problems, they should be avoided until after the cleft is repaired, usually at about 18 months of age. After repair it may be an effort to get the child to accept problem foods due to associated bad experiences, even though the foods will no longer cause trouble.

As tooth decay can be a problem with this disability, it is important that children with cleft lip and/or palate do not eat foods which promote dental caries, such as sweet and sticky foods (candy, chocolate, gum, jams, jellies and soft drinks, etc.) Sweet foods, often eaten as snacks, can be replaced by nutritious foods like cheese and crackers, fruit, cheese and meat spreads, and juices. Such a change would result in a healthier snacking pattern for anyone.

Special attention should be paid to good oral hygiene. Frequent brushing and flossing of teeth and regular dental check-ups are necessary. These measures will aid in the prevention of tooth decay and loss. This is especially important for those born with cleft lip and/or palate, as they are usually unable to wear dentures later in life.

ii. CEREBRAL PALSY

Individuals with cerebral palsy often have numerous eating and feeding problems. Lack of co-ordination or stiff muscles may create difficulties in getting food into the mouth. As well, there may be problems in attempting to bite, swallow, or chew. Three methods are commonly used to help in overcoming eating problems: special feeding techniques to facilitate eating; adapted utensils; and practice in eating skills. The details of these techniques are discussed in the following section.

iii. DOWN'S SYNDROME

Down's Syndrome not only results in feeding problems, but also seems to be associated with a tendency towards obesity.⁹ As a result, the calories in the diet should be considered carefully.

Problems other than the physical manipulation of food can cause difficulties at mealtimes. Many mentally handicapped persons display inappropriate eating behavior. Throwing or stealing food, licking food off of the plate, or refusing to eat all but one or two foods are common examples of behavior problems. While the majority of this behavior does not affect nutritional status directly, it plays a role in establishing mealtime atmosphere, and may affect food intake.

In many cases, various techniques of behavior modification have been used to lessen the undesirable behavior. These techniques are discussed in the following section.

⁹ Sigfried M. Pueschel et al. Down Syndrome: Growing and Learning, p. 68.

C. The Role of Nutrition in Degenerative Disease

Good nutrition is essential for everyone, but it takes on an added importance for the individual with the progressive diseases of multiple sclerosis, arthritis, or Parkinson's Disease. An adequate diet aids in resisting other illnesses which would compound the present disability. The degree of feeding and eating problems incurred by those with degenerative diseases depends on the severity of the disorder.

- i. MULTIPLE SCLEROSIS is a progressive disease which affects the central nervous system. It is totally unpredictable, and effects may range from extreme weakness and fatigue, lack of co-ordination, loss of sensation, and slurred speech, to paralysis of some or all parts of the body. If muscles of the hands, arms, or face are affected, feeding and eating problems will occur.
- ii. ARTHRITIS is an inflammation of the joints, but like multiple sclerosis it will only affect feeding and eating if it occurs in the hands or arms. Arthritis may lead to underweight resulting in greater fatigue and lowered resistance. When underweight exists, an effort to increase the number of calories should be made.
- iii. PARKINSON'S DISEASE, a condition caused by a disorder in the brain cells which regulate movement, results in shaking and difficulty in movement. As with other diseases affecting motor ability, this can lead to feeding and eating problems.

Parkinson's Disease is often accompanied by constipation. Some of the drugs given to control the disease will worsen the constipation. Liquid intake should be sufficient and dietary fibre should be increased by consuming high-fibre foods.

D. The Effect of Weight on Disability

Movement is more difficult for those with cerebral palsy, Parkinson's Disease, arthritis, and multiple sclerosis if they have extra weight to transport. Overweight may aggravate the problems of fatigue associated with multiple sclerosis.

In arthritic patients, added weight will put more stress on the affected joints, causing greater inflammation and pain.

E. Nutrition in Disabling Conditions References

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3

HOMEMAKING and FEEDING PROBLEMS



I. FEEDING PROBLEMS

Difficulties with the actual eating process are not a simple to correct. Except in cases where the problem is caused by a physical malformation, aids are of little use. Eating problems are more often caused by muscle impairment due to difficulty in receiving signals from the brain. Therefore, special feeding techniques and varied diet consistencies are used, rather than aids or devices.

A. Food Consistency

i. PUREED DIET

When a pureed diet is necessary, food value can be increased by substituting nutritious liquids for water when making the puree. Juices (fruit and vegetable), soup broths, or milk can be used.

A child on a pureed diet should see the food before it is pureed so that they learn to recognize the appearance of different foods.

Remember that some foods change their taste and smell when pureed, and may become unappetizing (eg. peas).

ii. CHOPPED DIET

Progression is generally from a pureed diet to a chopped diet, and then to solid foods. The chopped diet consists of most of the foods in a regular diet, except those which are very hard or crunchy (eg. nuts, raw carrots or celery).

The degree to which the food is chopped depends on the individual's eating ability. Progression from fine to coarsely chopped food prepares the person for a diet of solid food.

iii. SOLID DIET

The eating of solid foods may begin with finger feeding. Foods such as strips of meat, cheese, fruit or bread sticks are beneficial at this stage. Finger foods which encourage chewing are particularly important.

Progression to a solid food diet will not only assist speech development, but will also encourage independence. An individual is much more socially acceptable when they can eat the same types of foods as others.

B. Feeding Techniques

Changing the consistency of a diet is not the only way to deal with eating difficulties. There are many feeding techniques which can be used to overcome problems related to chewing and swallowing. When a child has an eating problem, a physical therapist should be consulted about appropriate feeding techniques and specific exercises that may help to alleviate the problem.

i. BIRD FEEDING

"Bird Feeding", the practice of tipping the disabled person's head back and pouring pureed food down their throat, arose out of sheer desperation: there seemed to be no other method of getting nourishment into those who could not swallow or chew. This method is dangerous, as aspiration pneumonia can occur if food enters the windpipe rather than the esophagus. In addition, "bird feeding" has many disadvantages: the disabled person is forced into a passive, dependant role; eating becomes an unpleasant and uncomfortable experience; negative attitudes towards foods may develop; and existence on a diet resembling infant food can make the disabled person feel helpless.

ii. CONTROLLING REFLEXES

Many problems occur because of the hyperactive gag reflex, which is related to oversensitivity in the mouth area. The individual will gag with much less provocation than most people. To reduce this reflex, a short spoon is pressed down on the tongue and then "walked" towards the back of the throat. The spoon is pressed on the tongue, and the child tries to remove the food from the spoon with the upper lip. Gagging will occur much less frequently if the feeder is careful not to scrape the spoon on the child's lips or teeth when removing it from the mouth.

iii. POSITIONING

Problems of positioning occur most frequently among those with cerebral palsy. Many children with cerebral palsy have a reflex wherein extension of one part of the body may cause the rest of the body to become extended.

The most convenient position has the child sitting straight up, with knees bent. Food should be presented from below or at the same level as the child so that the head does not have to be tilted back, as this might cause the entire body to extend. (Fig. 2). A cup with a hole cut out for the nose prevents the child from having to tilt the head back in order to drink. Pressing firmly on the chest will also aid in keeping the head forward.

iv. CHEWING AND SWALLOWING

Chewing and swallowing will only develop with practice in using the muscles involved. The development of muscles required for chewing are also necessary for the development of speech, and a lack of chewing practice may lead to speech problems. Since pureed foods require little or no chewing, the move from pureed to solid foods should be made wherever possible.

To encourage chewing, food should be placed at the side of the mouth. Both chewing and swallowing are aided by technique known as the three finger support. The middle finger is placed under the jaw, the index finger goes under the bottom lip, and the thumb rests on the cheek (Fig. 3). The middle finger exerts pressure on the lower jaw, but does not move up and down. This support stimulates swallowing, and may also be used to control tongue thrust. The index finger is used to initiate jaw-opening and helps to control head position. The thumb gives stability to the feeder's hand although it may also be used to give slight control to the motions of the jaw.



Fig. 2
Feeding position for
Cerebral Palsied Child.



Fig. 3
Three Finger Support

Source: Nancie R. Finnie, Handling the Young Cerebral Palsied Child at Home, London: William Heinemann Medical Books Ltd., 1974, pp. 117, 120.

C. Special Problems Related to Blindness

The main eating difficulties for the blind involve both location of food on the plate, and directing the food into the mouth. Those who are born blind must learn to associate foods with their names and to relate terms like salty and sour with the tastes which they represent.

The child should be consistently told the names of the foods which they are eating. Allow them to touch the food on their plates before eating. Make sure that they realize that the same food can take on different forms. When mashed potatoes are served, explain the transition process from the whole potato to the mashed version. As the child eats a particular food, verbally describe the taste so that the terms used will be learned.

The only way that a blind child will learn to feed themselves is through practice. It will likely be messy and time-consuming at first, but self-feeding is a great step towards independence.

Guiding the hand with progressively less assistance, coupled with the appropriate verbal instructions will provide the foundation for learning self-feeding skills. The same type of food should be located at the same place on the plate for every meal. For example, vegetables on the left, with bread above them.

As with other feeding difficulties, consultation with a therapist or a teacher for the blind should be arranged.

D. Other Feeding Problems

The feeding problems discussed so far have been concerned with the physical problems in manipulating food, or in the actual eating process. Although they do not affect areas of the body needed for eating, other types of disabilities may also lead to feeding problems.

i. BEHAVIORAL PROBLEMS

The other type of feeding problem which occurs is behavioral in nature. Behavioral problems often occur with mentally handicapped individuals or children who have been allowed to eat only a very limited variety of foods for a long period of time. Refusal to eat different or new foods can lead to temper tantrums and difficult mealtimes.

These problems are usually corrected by behavior modification techniques. Any inappropriate behavior while eating is dealt with by removing food for a time interval, or by removing the child from the setting. A consistent approach is the key to success with these techniques. Each time there is an inappropriate behavior, the child must experience the same consequence.

ii. ATTITUDES

To promote healthy attitudes towards nutrition and food, a pleasant mealtime atmosphere is important. A positive environment is an essential consideration when dealing with disabled individuals for whom eating may be a physically unpleasant chore. Although it may not be possible to eliminate all of the physical barriers, a pleasant atmosphere provides psychological motivation.

An attractive table setting with a center piece, appropriate lighting, and relaxed conversation will all enhance the mealtime atmosphere. If the disabled person finds that it requires too much effort to concentrate on both speaking and eating, conversation which does not require a great deal of verbal response can still take place.

Do not rush the mealtime. If slow eating is a problem, it is possible to purchase plates with a warming tray underneath so that the food remains warm throughout the entire meal. If feeding the individual, allow ample time for chewing and swallowing each mouthful before offering the next. Strive to make food appear as attractive as possible.

If eating is an enjoyable experience, the disabled person will have a greater desire to eat. A healthy mealtime attitude can go a long way towards overcoming a physical difficulty with feeding.

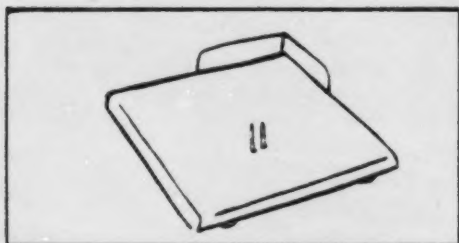
E. Feeding Aids

A variety of devices exist which can help to overcome some of the problems encountered in the preparation and physical aspects of eating food. A representative sample of these devices is illustrated in the following diagrams and accompanying guide.

The guide is divided into 6 major categories; food preparation devices, reaching aids, plates and cups, cutlery, mechanical feeders and aids for infants with cleft palate and/or lip.

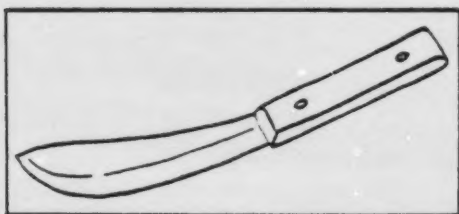
Aids should never be used in place of existing abilities as skills may be lost. However, used judiciously, aids can provide a greater degree of independence and a more gratifying lifestyle.

i. FOOD PREPARATION DEVICES



1. Cutting Board

Food is impaled on 2 stainless steel nails and does not have to be held. The guard can be easily made at home with some wood and stainless steel nails. It is useful for persons with the use of only one hand.



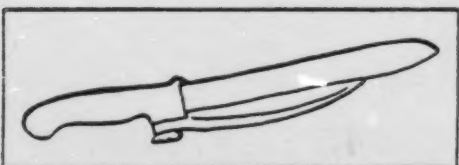
2. Rocker Butcher Knife

The Rocker Butcher Knife is used by placing the point of the knife in front of the food and bringing the blade down on top of it. In this way only one hand is needed to cut the food.



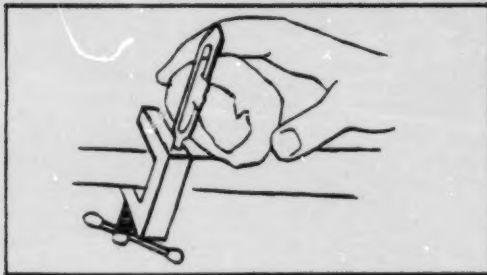
3. Swedish Cook's Knife

The long handle and sharp angle between the blade and handle on this knife allows food to be chopped easily with one hand.



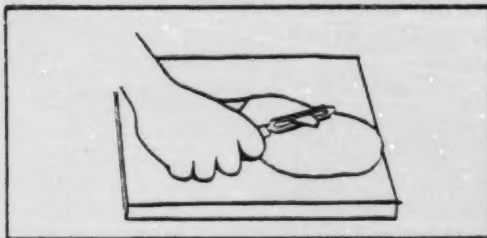
4. Guide Knife

A Guide Knife which can be adjusted to cut slices of a specific thickness is useful for blind individuals.



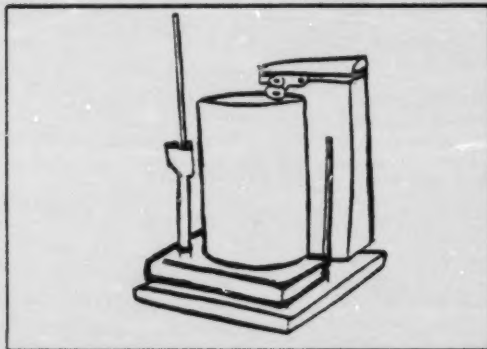
5. Vegetable Peeler

This double edged peeler is clamped to a counter and vegetables are moved against it, thereby allowing the use of one hand only.



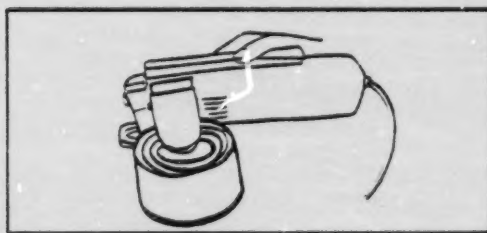
6. Floating Blade Peeler

The floating blade peeler has a blade which rotates so that food can remain stationary (impaled on a board). A better solution to the problem of peeling vegetables is to not peel them at all, as peeling allows vitamins and minerals to escape. If it is felt that appearance necessitates the peeling of vegetables, they should be peeled after they are cooked to minimize vitamin and mineral losses.



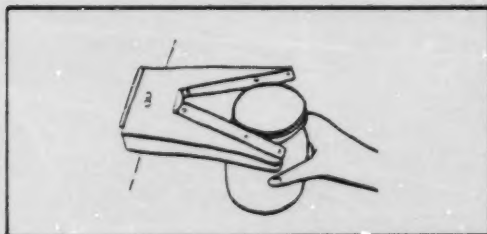
7. Can Opener

A can opener with a stand eliminates the need to hold the can with one hand while operating the opener with the other.



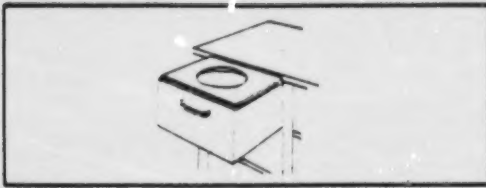
8. One-Handed Can Opener

Some commercial can openers such as this one are designed for one handed use.



9. Jar Opener

Some jar openers are useful for those with one hand as they eliminate the need to hold the jar with one hand and turn the lid with the other. Individuals with a weak grasp will also find this aid beneficial.



10. Home-Made Bowl Holder

This home-made device allows a person to mix without the problem of keeping the bowl stationary.



11. Commercial Bowl Holder

A bowl holder which can be purchased.



12. Home-Made Grater Holder

A home-made holder for a grater.



13. Commercial Grater Holder

A grater holder which can be purchased.



14. Spatter Cover

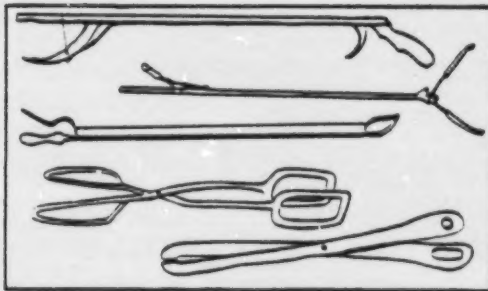
In most kitchens anyone sitting in a wheelchair will have their face at a height just above the burners on the stove. A spatter cover, shown in figure 14, will help to prevent burns. There are ways of redesigning kitchens in order to make them safer and easier to use for those in wheelchairs. References for this subject appear at the end of the home-making section.



15. Oven Mitts

These long oven mitts extend to the elbow and are useful in preventing burns. Especially useful for those with impaired vision.

ii. REACHING AIDS



16-20 Reaching Aids

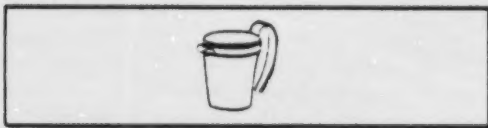
Figures 16-20 illustrate various types of reaching aids for those who can not extend their arms fully and/or who find bending difficult. Basically there are two types of devices; those with clamps and those with prongs.

iii. PLATES AND CUPS



21. Cup with Modified Handle

This type of handle allows a cup to be held without grasping.



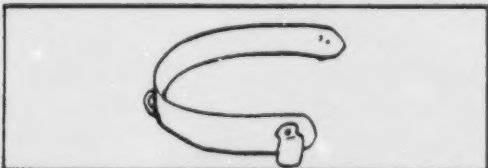
22. Cup With Enlarged Handle

This type of handle requires less of a grasp than a conventional handle.



23-25 Plates with High Sides

These plates all have high sides to replace the need to use a knife in one hand in order to push food onto the fork. The fork can be pushed against the side of the dish. This greatly simplifies eating for the one-handed individual.



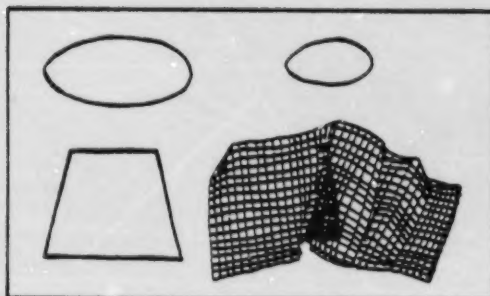
26. Plate Guard

A plate guard is a support against which food may be pushed.



27. Suction Cups

Suction cups which can be attached to dishes reduce the possibility of people with tremor or involuntary

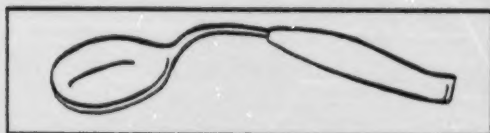


movements knocking items off the table.

28. Rubber Mats and Dycem Netting

These items can also be used to anchor plates and cups as an aid for people with tremor and involuntary movements.

iv. CUTLERY



29. Bent Handle Cutlery

Bent handles on cutlery assist individuals who have problems with joint flexibility.



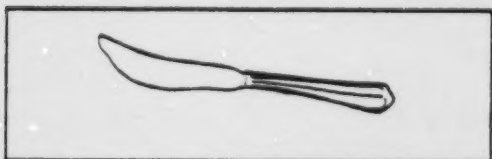
30. Extended Handle Cutlery

Extended handles are also an aid when flexibility is a problem as they allow individuals to eat without bending their elbows.



31. Offset Spoon

This spoon has a bent handle and with a very shallow dip in the rounded end. It is helpful for someone who experiences difficulty in removing food from a spoon with the lips as in the case of those with cerebral palsy.



32. Rocker Knife

This knife works on the same principle as the Rocker Butcher Knife but is adapted to a size suitable for eating.



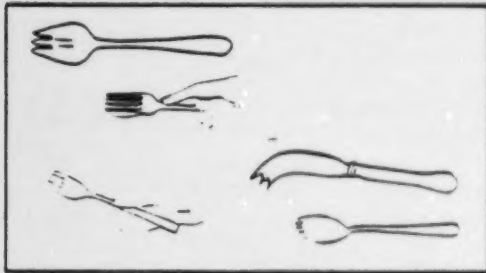
33. Built-Up Handle Cutlery

Those who have a weak grasp will find cutlery with built-up handles easier to use.



34. Hand Cuff

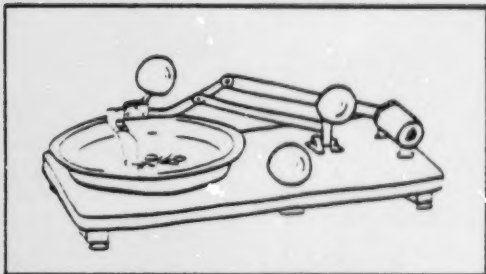
This type of cuff goes around the palm of the hand and has an insert for cutlery which makes grasping unnecessary.



35-39 Combination Utensils

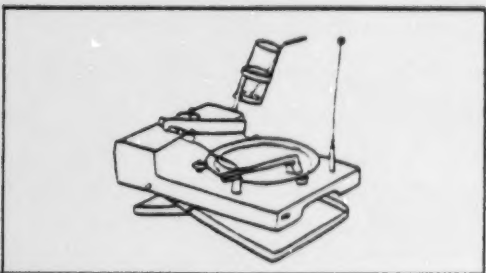
Combination utensils make it easier to eat with one hand. There are various styles depicted in figures 35-39. Figure 36 shows a fork with cutting edge on its side, figure 37, shows a utensil which is primarily a knife with prong on the end.

v. MECHANICAL FEEDERS



40. Cerebral Palsy Feeder

This feeder is useful for those with limited ability to use their hands. The knobs are manipulated to move the spoon and turn the plate to where the food is located. The knob can be operated by the fist or palm of the hand making flexibility of the finger joints unnecessary.



41. Automatic Feeder

This is an entirely automatic feeder, operated by a switch controlled by the chin. It allows independant feeding for those with no use of their hands or arms.

vi. AIDS FOR INFANTS WITH CLEFT PALATE AND/OR LIP

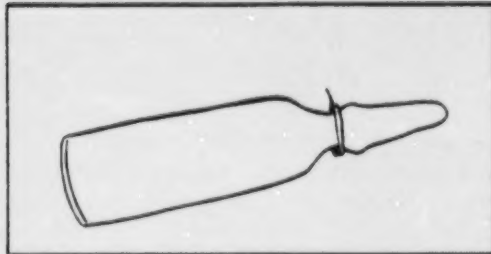
Babies with cleft palate and/or lip may have problems with sucking. There are special types of nipples which may alleviate this problem.

42. Butterfly Nipple

The flap on the nipple covers the cleft in the palate so that



the child can obtain suction and suck effectively.



43. Lamb's Nipple

This nipple, known as Lamb's Nipple, is softer, longer and has a larger hole than conventional nipples. The larger hole and softness means that less sucking effort is required. Also, the longer nipple may make it possible to get the milk past the cleft in the palate.



44. Brecht Feeder

This device is designed for children who can not suck. Squeezing the end forces milk out of the nipple. The milk should be directed towards the side of the cheek and not the back of the throat as this can cause choking. Feeders such as this should not be used any longer than absolutely necessary as they do not require that the child use any muscles. Since the muscle used in feeding are also important in speech development a lack of use may severely retard development of speech.

F. Feeding Problem References

- American Foundation for the Blind. Aids and Appliances for the Blind and Visually Impaired. 23rd ed. New York: A.F.B. 1977/78.
- American Heart Association. Do It Yourself Again - Self Help Devices for the Stroke Patient. Dallas, Texas: A.H.A., 1969.
- Blumenfeld, Jane et al. Help Them Grow! A Pictorial Handbook for Parents of Handicapped Children. Tennessee: Abingdon Press, 1971.
- Bowman, Marry, et al. Eating with a Spoon - How to Teach Your Multihandicapped Child. Ohio: Ohio State University, 1975.
- Bureau of Public Health Nutrition. A Guide for Feeding Children with Cerebral Palsy. California: California Office of State Printing, 1966.
- Doyle, Phyllis B., et al. Helping the Severely Handicapped Child: A Guide for Parents and Teachers. New York: Thomas Y. Crowell, 1979.
- Finnie, Nancie R. Handling the Young Cerebral Palsied Child at Home. 2nd ed. London: William Heinemann Medical Books, 1974.
- Gallender, Demos. Eating Handicaps - Illustrated Techniques for Feeding Disorders. Springfield, Illinois: Charles C. Thomas, 1979.
- Perske, Robert et al. eds. Mealtimes for Severely and Profoundly Handicapped Persons. Baltimore: University Park Press, 1977.
- Rosenberg, Charlot. Assistive Devices for the Handicapped. American Rehabilitation Foundation, 1968.
- Widerberg, Lloyd C. and Kaarlela, Ruth. Techniques for Eating: A Guide for Blind Persons. Michigan: Western Michigan University, 1977.
- Woodburn, Jane M. and Fitch, Maeona M. Feeding Programs and the Handicapped Child. Washington, D.C.: Woodburn and Fitch, 1978.

II. HOMEMAKING

Another of the difficulties in many disabling conditions involves the ability to purchase and prepare food.

A. Food Preparation

When a homemaker must conserve physical energy, or finds food preparation time consuming due to a disability, one possible solution is to make use of convenience foods.

Acceptance of convenience foods will depend on the homemaker's value system. The importance which the role of cooking plays in the homemaker's life will affect food purchasing choices. If home cooking is greatly valued, or if food additives and processed foods are avoided, a large portion of time and energy will have to be devoted to cooking, and this decision should be made by the individual. The professional can help by suggesting the use of convenience foods, but if the homemaker refuses to use them, advice on energy saving techniques can be given.

If the homemaker uses convenience foods, certain practices can help to improve the nutritional value of the food. When problems with obesity exist, foods without added sugar should be chosen. Canned fruits packed in water or their own juice have less calories than those packed in syrup. In most cases, fewer nutrients are lost in freezing than in canning. Frozen vegetables are already chopped and cook quickly. When using canned products, the food should be cooked in their own liquid so that further nutrient loss does not occur. Fruit juices are preferable to fruit "drinks" as these often contain added sugar, artificial flavorings and colors. Even though "drinks" are often fortified with added Vitamin C, juices have a greater amount of vitamins and minerals, and contain fibre.

B. Budgeting

Many disabled persons must exist on a low income, as they may be unable to work. Medications, treatments, and self-help devices are very expensive.

There are several methods of saving money on food without compromising quality. Buying the lowest grade of canned or frozen goods can save money. Grading is done according to the appearance of the food, and is not a measure of nutritional quality. If appearance is not important for a certain dish (e.g., a casserole), the lower grade can be used.

Savings can also be realized with the use of powdered milk rather than fluid milk. With cheeses, the milder flavors are usually more inexpensive (Table 10). Store brands are often cheaper and of equal quality to name brands (Table 11).

TABLE 10 Comparison of Prices of Various Forms of Milk Products

Item	Cost
Milk, 250 ml	
Evaporated	\$0.34
Chocolate	0.20
Whole	0.17
2%	0.16
Skim	0.16
Reconstituted Skim Milk Powder	0.09
Cheese, 120 g	
Processed slices	\$0.75
Cheddar, Old	0.66
Cheddar, medium	0.64
Cheddar, mild	0.62

Source: Toronto Area Supermarkets, August, 1980.

TABLE 11 Comparison of Prices of Name Brand and Store Brand Foods

Item	Cost
Canned Corn, 12 oz.	
Name Brand	\$0.62
Store Brand	0.46
Canned Tomatoes, 28 oz.	
Name Brand	0.89
Store Brand	0.72
Rigatoni Pasta, 2 lbs.	
Name Brand	1.27
Store Brand	0.99
Long Grain Rice, 5 lbs.	
Name Brand	2.43
Store Brand	1.89
Canned Apple Juice, 48 oz.	
Name Brand	1.25
Store Brand	1.13
Canned Tomato Juice 48 oz.	
Name Brand	1.05
Store Brand	0.69

Source: Toronto Area Supermarkets, August, 1980.

A great deal of money is often spent on impulse buying. Stores often put items which lend themselves to impulse buying at the end of aisles or at check-out counters where they will catch the shopper's eye. A shopping list planned in accordance with a menu plan will help to avoid buying foods which are not really needed. If shopping is done at a supermarket, menus can be planned around the various weekly specials. Careful shopping can help the individual on a limited income to reduce food costs.

C. Homemaking References

Canada. Department of National Health and Welfare and Agriculture
Canada. Shopping for Food and Nutrition. Ottawa: Queen's
Printer, 1979.

Foott, Sydney, et al. eds., Kitchen Sense for Disabled People
Of All Ages. London: William Heinemann Medical Books, 1977.

Gilbert, Arlene E. You Can Do It From A Wheelchair. New Rochelle,
New York: Arlington House, 1973.

Helpful Hints for the Homemaker with Arthritis. Quebec:
Charles E. Frosst and Company, (197?).

Klinger, Judith Lannefeld. Meal-time Manual for People with
Disabilities and the Aging. New Jersey: Campbell Company, 1978.

May, Elizabeth Eckhardt, et al. Homemaking for the Handicapped.
New York: Dodd, Mead and Company, 1966.

May, Elizabeth, Eckhardt, et al. Independant Living for the
Handiapped and the Elderly. Boston: Houghton Mifflin, 1974.

McCullough, Helen E. and Farnham, Mary B. Kitchens for Women
in Wheelchairs. Illinois: University of Illinois, (197-).

Nichols, Phillip. Living with a Handicap. London: Priory Press,
1973.

U.S. Department of Veteran Benefits, Veterans Administration.
Handbook for Design: Specially Adapted Housing. Washington, D.C.,
U.S. Government Printing Office, 1978.

4

Background Resources on Nutrition Education for the Disabled

compiled and annotated
by
Donna MacDonald

BACKGROUND RESOURCES ON NUTRITION EDUCATION FOR THE DISABLED

The references provided in this section are intended to provide information and materials on nutrition and education directed at the mentally and physically disabled.

Nutrition education specialists may need both appropriate resource tools and basic background information on the methods of educating the disabled in order to create suitable programs for this audience. On the other hand, the professionals who deal with the disabled on a day-to-day basis may have a strong grasp of educational methods, but require more knowledge of nutritional principles. Parents of disabled children are increasingly interested in the nutritional aspects of handicapping conditions, and some of the materials listed here are appropriate for use in the home.

Books on the educational methods used with various groups of disabled persons are outlined in Part I. Nutrition curriculum guides, teaching resources and information manuals dealing in whole or in part with nutrition are listed in Part II and some of these were designed specifically for use with the physically and/or mentally handicapped. Others, designed for specific grade or age levels, can be appropriately adapted in certain situations. Not all resources will be appropriate for use with any particular disability, and not all are adaptable in every situation. Each resource must be assessed in terms of the potentials inherent in a particular disabling condition. Part III provides reference to a number of nutrition-related bibliographies and indexes which list many additional sources of information. Part IV includes a list of the pamphlets and illustrative materials included in the original resource kit of which this manual was the major component.

I. BASIC TEXTBOOK REFERENCES ON EDUCATIONAL METHODS
FOR THE DISABLED

Anderson, Robert, M., and Greer, John, G. Educating the Severely and Profoundly Retarded. Baltimore: University Park Press, 1976. 422 p.

This book presents a series of articles compiled and organized to meet the changing needs of professional and non-professional people working with the severely and profoundly retarded. Of particular interest are those chapters which include information on assessment, instructional programs and materials, and the development of self-care skills.

Bender, Michael, and Vallett, Peter, J. Teaching the Moderately and Severely Handicapped - Curriculum Objectives, Vol. 1: Behaviour, Self-Care, and Motor Skills. Baltimore: University Park Press, 1976. \$14.95

This teaching text describes a complete curriculum for use with moderately and severely mentally handicapped students. Curriculum objectives, teaching activities, diagnostic check-lists and the materials required are described. Discussion of independent feeding, meal planning and food storage, purchasing and preparation is included.

Berendsen, W. C., et al. Life Experience Training: Education for Living Curriculum. Toronto: Ontario Association for the Mentally Retarded, 1978. \$7.00

A teaching manual for people working with the mentally handicapped. Detailed instructions on the use of behavior modification to teach daily living skills are provided. This manual also specifies nutritional requirements and gives ideas on reducing food costs, proper table manners, and food shopping methods.

SOURCE: Ontario Association for the Mentally Retarded, 1376 Bayview Avenue, Toronto, Ontario, M4G 3A3

Bradley, Betty Hunt, Hundziak, Marcel, and Patterson, Ruth, M. Teaching Moderately and Severely Retarded Children - A Diagnostic Approach. Springfield, Illinois: Charles C. Thomas Publishers, 1971. 324 p.

The first chapter summarizes the various schools of thought related to methods for educating the learning disabled while the second chapter contrasts the development of the normal child. In the third chapter, an extensive section on resources for programs lists reading readiness materials, number concepts materials, and general teaching aids, some nutritionally related, with others adaptable to a nutrition education effort.

Brewer, Garry, D., and Kakalik James, S. Handicapped Children - Strategies for Improving Services. New York: McGraw-Hill Book Company, 1979. 612 p. \$19.95

With the support of the Rand Corporation, the authors of this book have updated and condensed two lengthy government reports dealing with services for handicapped children. In addition to summarizing the study and its recommendations, the book examines prevalence estimates and definitions of handicapping conditions and the needs of handicapped children including: prevention, identification, direction, medical services, education, equipment, programs, vocational services, and income maintenance. The book is indexed and extensively referenced. A list of related Rand Corporation reports is included.

Corn, Lesley Ann and Martinez, Inis. When You Have A Visually Handicapped Child in Your Classroom: Suggestions for Teachers. New York: American Foundation for the Blind, 28 p. 1977.

Methods for teaching the visually handicapped child in the regular classroom are discussed. Special devices and skills which the child may need are covered.
SOURCE: American Foundation for the Blind, 15 West 16th St., New York, N.Y. 10011

Doyle, Phyllis, B., Goodman, John, F., Grofsky, Jeffery, N., and Mann, Lester. Helping the Severely Handicapped Child - A Guide for Parents and Teachers. New York: Thomas Y. Crowell Publishers, 1979. 150 p. \$10.00.

Presented in a non-technical form, this guide is designed for individuals working with severely handicapped children - those with severe physical impairments who are also mentally retarded. Part I describes a public school training program. Part II deals with helping the child with daily activities such as motor skills, communication, positioning, feeding, dressing, toilet training, play and recreation. The third section provides a list of resources relating to services, equipment and information. A reading list and select bibliography are also provided.

Dyer, Nancy and Homeyer, Pat. A Practical Education Program for the Diabetic Client Within the Rehabilitation Setting. New York: American Foundation for the Blind, 1979. 147 p. \$4.00.

Designed for use by health professionals dealing with blind diabetics, this manual contains instructional units with learning activities relating to diet and exchange lists, meal planning, medication, glucose and ketone levels, health and travel.

SOURCE: American Foundation for the Blind, 15 West 16th St., New York, N.Y. 10011

Folson, Geneva S., et. al. Life Skills for the Developmentally Disabled: An Approach to Accountability in Deinstitutionalism, Volume III: Manual for Training Clients. Washington, D.C.: George Washington University, 1975. \$7.35.

A manual that describes techniques for training institutionalized clients for community living. Covers such skills as eating in public, budgeting, handling money, shopping skills and food preparation.

SOURCE: George Washington University, Division of Rehabilitation Medicine, 2300 Eye St., N.W., Washington, D.C., 20037.

Goldenson, Robert, M., ed. Disability and Rehabilitation Handbook. Toronto: McGraw-Hill, 1978.

Factual information on all major disabilities and rehabilitation methods is provided in physical, psychological, social and vocational context. The diet for each specific disability is discussed, as well as general information on feeding and homemaking. Included is an extensive listing of organizations, periodicals and sources of information.

Heinich, Robert ed. Educating all Handicapped Children.
Englewood Cliffs, New Jersey: Educational Technology
Publications, 1979. 361 p. \$15.95.

Examines the impact of American Public Law 94-124.
(Education of All Handicapped Children Act) on education.
This book provides valuable guidelines to educators
regarding the management of educational change in areas
such as school structure, teacher education, instruction
design, school-parent relationships and the finance and
governance of education. Mainstreaming and individualized
learning are stressed. Of particular interest to educators
of the disabled and other interested professionals are
the chapters dealing with the design, selection and
evaluation of instructional materials for handicapped
learners. Each chapter is supplemented by comprehensive
reference lists.

Johnson, Vicki, M., Werner, Roberta, A. A Step-by-Step Learning
Guide for Retarded Infants and Children. Syracuse, New York:
Syracuse University Press, 1975. 195 p. \$7.95.

A curriculum developed to meet the educational needs of a
diverse population of mentally handicapped children is
described. The program is appropriate for children between
the ages of birth and twelve years, but the major emphasis
is for children who have a functional level of less than
four years of age. The book explains the objectives and
procedures for 240 learning tasks under the broad categories
of sensory stimulation, social behavior, imitative skills,
gross motor development, self-care skills, language skills,
fine motor skills and perceptual abilities.

Larsen, Stephen, C., and Poplin, Mary, S. Methods for Educating
the Handicapped: An Individualized Education Program
Approach. Boston: Allyn and Bacon, Inc., 1980. 446 p.

Based on American Public Law 94-142 (Education of All
Handicapped Children Act) this book outlines a comprehensive
and practical methodology for educating handicapped students.
Procedures, methods, guidelines, sample forms and techniques
are presented in the context of individualized instruction.
The chapters dealing with referral, screening and evaluation,
instructional and general objectives, and educational services
are of specific interest to Canadian educators and other
professionals working with the disabled. Case studies,
extensive references and a detailed index supplement the
information presented in the main text.

Morgenstern, Milan, Low-Beer, Helen, and Morgenstern, Franz.
Practical Training for the Severely Handicapped Child.
Suffolk, England: Spastics Society, 1966. 134 p.

The purpose of this book is to give practical guidance to parents and teachers in educating a severely retarded child, and the methodology centers around utilizing the child's natural interests. The problem of establishing positive initial contact and its impact on later progress and proper training is examined. Case histories, materials and exercises are presented and discussed.

Perry, Natalie. Teaching the Mentally Retarded Child. New York: Columbia University Press, 1974. 750 p.

The definition, prevalence, causes and syndromes of mental retardation are discussed by the author as an introduction to school programs, curriculum and activities for the trainable pupil. Each section is accompanied by a selected reading list. The appendixes provide lists of books and educational materials appropriate for use with the trainable pupil. In addition to the general index, an index to craft objects and games is included.

Rogovin, Anne. Learning by Doing - An Illustrated Handbook for Parents and Teachers of Children Who Learn Slowly. Johnstown, Pennsylvania: Mafex Associates, 1971. \$3.25

This book covers a range of activities relating to daily living skills. Of particular interest is the chapter on home economics, which contains suggestions on teaching shopping and food preparation skills, as well as table etiquette. Photographs and diagrams illustrate the methods used.

SOURCE: Ontario Association for the Mentally Retarded,
1376 Bayview Avenue, Toronto, Ontario, M4G 3A3

Velleman, Ruth, A. Serving Physically Disabled People - An Information Handbook for All Libraries. New York: R.R. Bowker Company, 1979. 392 p.

The author of this book is a librarian in a school for the physically disabled. The objectives of the book are to explore the informational needs of physically disabled people, to examine the role of the librarian in meeting these needs, and to offer additional sources of information. In this context, the author has provided a valuable reference tool for all professionals and interested individuals working with the physically disabled. The first section of the book attempts to provide insight into the problems of the disabled through discussion of attitudes and by defining disabilities. Extensive references are given for inclusion in a core public library collection, and a model rehabilitation library. The appendixes form a directory of professional and volunteer agencies, government agencies, independent living centers, rehabilitation and training centers, special education centers and suppliers of aids and equipment. While Canadian organizations are not comprehensively included, the book is nevertheless an excellent resource for those involved with the physically disabled.

II. NUTRITION CURRICULUM GUIDES, TEACHING RESOURCES AND INFORMATION MANUALS

Amary, Issam, B., Effective Meal Planning and Food Preparation for the Mentally Retarded/Developmentally Disabled - Comprehensive and Innovative Teaching Methods. Springfield, Illinois: Charles C. Thomas Publishers, 1979. 212 p. \$21.50

This book provides the basic principles of meal planning, food preparation and nutrition for the mentally disabled student. The level of use is at the fourth and fifth grade. Over 100 recipes designed specifically for mentally handicapped are included.

The Arthritis Society. The Truth About Diet and Arthritis. Atlanta, Georgia: The Arthritis Foundation, 1980. 4 p. Free

This pamphlet informs the arthritic patient that there is no special curative diet for this disease. Weight problems and gout are also discussed.

SOURCE: The Arthritis Society, 920 Yonge Street, Suite 420, Toronto, Ontario M4W 3J7

Ayres, Laurie. Food and Human Energy: Curriculum Ideas for Teachers. Toronto: Ontario Ministry of Education, 1980. 43 p. Free

Arranged by topic in 13 "activity sets", with a glossary and bibliography, this curriculum guide concentrates on the ecological approach to food and nutrition. Concepts central to all aspects of food are discussed, and suggestions regarding activities and support materials are provided.

SOURCE: Ontario Ministry of Education, Communication Services Branch, Mowat Block, 14th Floor, 900 Bay St., Toronto, Ontario M7A 1L2

Bowman, Mary, et. al. Eating With a Spoon - How to Teach Your Multi-handicapped Child. Ohio: Ohio State University, 1975. \$5.95

This book gives suggestions to parents on how to teach their handicapped child to eat with a utensil.

SOURCE: Publications Sales Division, Ohio State University Press, 2070 Neil Avenue, Columbus, Ohio 43210

Callahan, Dorothy, L., ed. Focus on Nutrition: Teacher's Handbook for Nutrition Education - Grades Kindergarten through Six. Massachusetts: Department of Education and the Bureau of Nutrition Education and School Food Services, 1976. 69 p. \$1.50

Nutrition facts, nutrition education methods and food habits are discussed. Included are curriculum guides for Kindergarten to grade six.

SOURCE: Bureau of Nutrition Education and School Food Services, 31 St. James Avenue, Boston, Massachusetts 02116

Canada Department of National Health and Welfare. Bureau of Nutritional Sciences. Canada's Food Guide Handbook. Ottawa: Department of National Health and Welfare, 1979. 40 p. Free

A resource manual explaining Canada's Food Guide, including food adaption patterns for the life cycle and other situations. Suggested teaching resources and references are provided.

SOURCE: Information Directorate, Health and Welfare Canada, Brooke Claxton Building, Ottawa, Ontario K1A 0K9

Cobb, V. Science Experiments You Can Eat. Toronto: McClelland and Stewart, 1972. \$2.85

Outlines experiments using food to illustrate various nutritional and scientific principles. The results of the experiments are edible.

Community Information Center. Information for the Physically Handicapped, 1978-79. Toronto: Community Information Center, (1979?). 31 p. Free

This guide lists programs and services in the Metropolitan Toronto area of interest to people with physical disabilities. For availability of similar guides for other geographic locations, contact the appropriate municipal health unit.

SOURCE: Community Information Center, 34 King Street E., 3rd floor, Toronto, Ontario M5C 1E5.

Canadian Dairy Foods Service Bureau. Comparison Cards. Toronto:
Canadian Dairy Foods Service Bureau, (197-?), \$2.50.

The nutrient profiles of 50 common foods are presented on individual cards in bar graph form. The graphs are based on recommended nutrient intakes for a teenager (female, age 13-15) from the 1975 Dietary Standard for Canada. A teachers guide is included.

SOURCE: Canadian Dairy Foods Service Bureau, 20 Holly St., Toronto, Ontario M4S 2E6

Fry, B., and Swanson, J. A Teachers Guide to Learning Nutrition through Discovery. Ithaca: Cornell University, (197-?), \$1.35.

Contains classroom activities and suggestions dealing with food and nutrition for kindergarten through grade six.

SOURCE: New York State College of Human Ecology, Cornell University, Ithaca, N.Y. 14850

Gallender, Carolyn Newton and Gallender, Demos. Dietary Problems and Diets for the Handicapped. Springfield, Illinois: Charles C. Thomas Publishers, 1979. 224 p. \$16.25

Topics covered in this book include: basic theory of the relationship of diet and body function; physical disabilities as they relate to diet; and basic information on diets, menus and recipes for the disabled.

Gallender, Demos. Eating Handicaps - Illustrated Techniques for Feeding Disorders. Springfield, Illinois: Charles C. Thomas Publishers, 1979. 312 p. \$21.75

Data and theory on the anatomical and physiological aspects of eating handicaps are discussed, and practical, easily-applied methods of treatment are illustrated.

Gallender, Demos. Teaching Eating and Toileting Skills to the Multi-Handicapped in the School Setting. Springfield, Illinois: Charles C. Thomas, 1980. 384 p. \$19.75

A resource book for those working with students with eating handicaps and lack of toileting skills. The program and technique suggestions can be used not only in the classroom setting, but also in hospitals, residential facilities, or in the home.

Goodwin, M. T., and Pollen, G. Creative Food Experiences for Children.
Washington: Centre for Science in the Public Interest, 1980.
191 p. \$5.95

Methods of involving children in food experiences are explored in this book, through activities relating to the four food groups. Also included are suggestions for integrating the study of food into other subject areas; ideas for celebration meals; a recipe section and a chapter devoted to other resources.

SOURCE: Centre for Science in the Public Interest, 1755 S. Street NW, Washington, D.C. 20009

Government of Canada. Fitness and Amateur Sport. Physical Activity and Weight Control. Ottawa: Supply and Services Canada, 1979.
10 p. Free

This pamphlet discusses the problem of overweight and proposes solutions based on caloric balance. References are listed for further reading.

SOURCE: Fitness and Amateur Sport, Journal Tower South, 365 Laurier Avenue West, Ottawa, Ontario K1A 0X6

Hargrave, Madelyn. Nutritional Care of the Physically Disabled.
Minneapolis, Minnesota: Sister Kenny Institute, 1979. 49 p.
\$6.85

Intended as a guide for health professionals in providing nutritional care for the physically disabled, this book includes information on nutritional care plans, evaluation of nutritional status, and dietary modifications for specific diseases.

SOURCE: Sister Kenny Institute, Chicago Avenue at 27th Street, Minneapolis, Minnesota 55407

Home Economics Instructional Materials Center. Vocational Education for the Handicapped - Food Service Guide. Lubbock, Texas: Texas Tech University, 1980. 491 p. \$12.50

Designed for use in teaching the food service phase of a general home and community service program or in teaching a food service program for the handicapped, this guide includes instructional materials in the areas of sanitation, safety, food storage, small equipment, large equipment, food production, quantity cooking, and customer service.

SOURCE: Home Economics Instructional Materials Center, Texas Tech University, Box 4067, Lubbock, Texas 79409

Johnson, Virginia Stewart, Smith, Mary Ann Harvey, Bittle, Joyce B., and Nuckolls, Leah Jane. Nutrition Education for Retarded Children - A Program for Teachers. Memphis: University of Tennessee, (197-?). 183 p. \$5.50

Describes a pilot nutrition education program for normal kindergarten, elementary mildly mentally retarded and any moderately mentally retarded students. In their review of the literature, the authors have discussed mental retardation, the importance of nutrition, approaches to nutrition education and techniques of teaching. The pilot program is explained and the results of an evaluation are included. A comprehensive teacher's guide provides the curriculum platform and gives examples of all instruments used in the program. This practical and unique publication will be of specific interest to those working with groups of retarded children at the elementary level.

SOURCE: University of Tennessee, Child Development Center, 711 Jefferson Avenue, Memphis, Tennessee 38105

Kahan, Ellen House. Cooking Activities for Retarded Children. New York: Abingdon Press, 1974. \$3.55

Detailed instruction for parents and teachers of the educable retarded on teaching retarded children the skills of cooking and baking. The recipes are shown in pictorial symbols.

SOURCE: Abingdon Press, 201 8th Avenue South, Nashville, Tennessee 37202

Katz, D., and Goodwin, M.T. Food: Where Nutrition, Politics, and Culture Meet. Washington: Center for Science in the Public Interest, 1976. \$4.50

Student activities designed to increase awareness of the social, psychological, biological and political parameters of nutrition are presented in this book.

SOURCE: Center for Science in the Public Interest, 1755 S. Street NW, Washington, C.C. 20009

Klinger, Judith Lannfeld. Mealtime Manual for People with Disabilities and the Aging. Campton, New Jersey: Campbell Soup Company, 1978. 269 p. \$3.25

Practical information for people with physical disabilities on how to prepare and eat foods is provided. Many aids and adaptive devices are illustrated, as well as information on convenience foods, and nutrition. A recipe section is included.

SOURCE: Campbell Soup Company, 1 Campbell Place, Campton, New Jersey 08101

Manitoba Department of Health and Social Development. Food for Thought.
Winnipeg: Manitoba Department of Health and Social Development
1973. 167 p. \$2.50

This teaching guide was designed for use with kindergarten to grade six students. The relationship between foods and health is stressed, and the economics of the food supply is examined. Pre-tests, background information, guidelines for teaching and suggestions for learning activities are provided.

SOURCE: Manitoba Queen's Printer, Provincial Library and Archives Building, 200 Vaughan St. Winnipeg, Manitoba

Marbach, Ellen, S., Plass, Martha, and O'Connell, Lily Hsu. Nutrition in a Changing World: A Curriculum for Preschool. Provo, Utah: Brigham University Press, 1979. 206 p. \$8.95

Written for teachers with little or no training in nutrition, this guide allows preschool children to use their senses of sight, sound, taste, smell and touch to discover food concepts. Original poems, stories, songs and plays are included to make the learning experience interesting.

SOURCE: The Nutrition Foundation, Office of Education, 888 Seventeenth St. N.W. Washington, D.C. 20006

Minnesota Instructional Materials Center. Look and Cook. White Bear Lake. Minnesota: Minnesota Instructional Materials Center, (197-?). 89 p. \$3.25

A recipe book designed for teaching mentally retarded adults about foods and cooking. Recipes are listed under a food group category and both text and pictures are used to explain each recipe.

SOURCE: Minnesota Instructional Materials Center, 3554 White Bear Avenue, White Bear Lake, Minnesota 55110

Morris, Suzanne Evans. Program Guidelines for Children with Feeding Problems. Edison, New Jersey: Childcraft Education Corporation, 1977. \$5.95

This manual is designed for use with children who may or may not be mentally retarded, but who have mild neurological impairments. It is divided according to specific feeding problems, for example, gagging and vomiting, tongue thrust, etc. Each section lists step-by-step guidelines and suggestions.

SOURCE: Childcraft Education Corporation, 20 Kilmer Road, Edison, New Jersey 08817

National Dairy Council. Food Models. Illinois: National Dairy Council (197-?), 71 models, color \$2.50

These life-size, color photographic reproductions are particularly suitable for nutrition and health educators in elementary and junior high schools, but can be adapted for use in a wide variety of situations. Size and weight of portion, nutrient and calorie information are provided on the back of each model and a teaching guide is included.

SOURCE: Canadian Dairy Foods Service Bureau, 20 Holly St., Toronto, Ontario M4S 2E6

National Dairy Council. How Your Body Uses Food. Illinois: National Dairy Council, (197-?), 28 p. \$0.75

Appropriate for junior grades, this booklet contains science experiments designed to encourage an understanding of the role of nutrients in foods. Digestion, transportation and the use of nutrients for the growth and repair of body cells are also included. A teacher's guide is provided.

SOURCE: Canadian Dairy Foods Service Bureau, 20 Holly St., Toronto, Ontario M4S 2E6

National Dairy Council. Nutrition Source Book. Rosemont, Illinois: National Dairy Council, 1979. 40 p. \$2.00

This source book, developed for use in a wide variety of nutrition education programs and situations, is a compact nutrition reference book. Throughout, the "nutrient approach" to teaching nutrition is used. Food handling, dietary standards, nutrient sources and function, dietary surveys, food guides, food buying, nutrition information, the cultural aspects of food and the questions of hunger and malnutrition are examined. Nutrition tables and lists of references and resources are provided. American standards are used, and in some cases, these may differ from Canadian ones.

SOURCE: National Dairy Council, 6300 North River Road, Rosemont, Illinois 60018

National Dairy Council. Weight Control Source Book. Illinois: National Dairy Council (197-?), \$0.85.

Published information on overweight and obesity is reviewed in this source book. Designed to assist the educator in planning weight control programs.

SOURCE: Canadian Dairy Foods Service Bureau, 20 Holly St., Toronto, Ontario M4S 2E6

Neely, R.A., and Smith, M.A. Program for Feeding Training of Developmentally Delayed Children. Memphis: University of Tennessee, 1977. 69 p. \$1.50

This booklet outlines a program for feeding training to be used with children who have potential for self-feeding skill development. Provides information on nutritional assessment, developing an individualized program, specialized feeding training and parental involvement and follow-up.

SOURCE: University of Tennessee, Child Development Center, 711 Jefferson Avenue, Memphis, Tennessee 38105

New Jersey. The State University. Home Economics and the Exceptional Student: A Handbook for Home Economics Teachers Working with Mentally Retarded Children. New Brunswick, New Jersey: The State University, 1976. \$2.06

Contains the proceedings of a workshop designed to assist the home economics teacher in working with exceptional children, especially the mentally retarded. Workshops discuss characteristics of the mentally retarded, life-skill competencies and curriculum suggestions.

SOURCE: Curriculum Laboratory, Rutgers - The State University, Building 4103 - Kilmer Campus, New Brunswick, N.J. 08903

Newfoundland and Labrador. Department of Social Services. Feeding the Child who is Developmentally Delayed. St. John's: Newfoundland and Labrador Department of Social Services, 1979. 16 p. Free

This booklet gives suggestions on how to meet the nutritional requirements of the retarded and describes some of the techniques and devices used in feeding.

SOURCE: Mental Retardation Programs, Department of Social Services, Confederation Building, St. John's, Newfoundland, A1C 5T7

Ontario Heart Foundation. The Fitness Wheel. Ottawa: Canadian Heart Foundation, 1975. Free

The caloric and cholesterol content of various foods are given on this cardboard wheel, along with the number of minutes of exercising required to burn off the calories. Foods from each of the food groups are represented.

SOURCE: Ontario Heart Foundation, 576 Church Street, Toronto, Ontario M4Y 2S1 OR Your Provincial Heart Foundation Chapter.

Ontario Milk Marketing Board. Good Beginnings: A Nutrition Education Program for Preschoolers. Toronto: Ontario Milk Marketing Board, (1979?), 50 p. Free

Available only to workshop participants, this manual provides the educator with the background information, teaching suggestions and actual materials to teach nutrition concepts to preschoolers. The workshops are free, and can be arranged by contacting the OMMB. Residents of provinces other than Ontario should contact their provincial milk marketing board or branch of the Dairy Bureau for information regarding the availability of the program in their area. In addition to the preschool workshop, primary (K-3), junior (4-6), and intermediate (7-10), workshops are available.

SOURCE: Ontario Milk Marketing Board, Nutrition Education Division, P.O. Box 4027, Postal Station A, Toronto, Ontario M5W 9Z9

Ontario Ministry of Culture and Recreation. Sports and Fitness Branch. Fitness and Nutrition - It's a Matter of Balance. Toronto: Ontario Ministry of Culture and Recreation, 1980. 14 p. Out-of-print.

Exercise and weight control are emphasized with tables and a quiz in this informational booklet. Guidelines for rating overall "foodstyle" are listed.

SOURCE: Ontario Ministry of Culture and Recreation, Sports and Fitness Branch, 8th floor, 77 Bloor St. W., Toronto, Ontario M7A 2R9

Ontario Ministry of Culture and Recreation. Sports and Fitness Branch. How Fit is Your Foodstyle? Toronto: Ontario Ministry of Culture and Recreation, 1979. 14 p. Free

Through the presentation of self-assessment checklists and charts, this pamphlet assists the user in determining the adequacy of their food intake. Selected references for further information are provided.

SOURCE: Ontario Ministry of Culture and Recreation. Sport and Fitness Branch, 8th floor, 77 Bloor St. W., Toronto, Ontario M7A 2R9

Ontario Ministry of Health. Easy Eating With Canada's Food Guide. Toronto: Ontario Ministry of Health, 1979, 6 p. Free

The principles of Canada's Food Guide are adapted to the specific situations of weight control, convenience, food costs, snacking and eating out.

SOURCE: Ontario Ministry of Health, Communications Branch, 9th floor, Hepburn Block, Queen's Park, Toronto, Ontario M7A 1S2

Perske, Robert, et. al., eds. Mealtimes for Severely and Profoundly Handicapped Persons. Baltimore: University Park Press, 1977. \$14.50

Mealtimes for the severely and profoundly mentally handicapped are described and the value of creative interactions, creative uses of people, and helpful mealtime atmospheres are discussed.

Redick, Sharon Smith. The Physically Handicapped Student in the Regular Home Economics Classroom - A Guide for Teaching Nutrition and Foods. Danville, Illinois: Interstate Publishers, 1976. \$6.75

This guide contains curriculum suggestions for teaching physically handicapped students in the home economics field. The content, geared to the 13 to 15 year old student, includes curriculum guidelines and suggestions for materials and games.

Reed Steed, Freida. A Special Picture Cookbook. Lawrence, Kansas: H. and H. Enterprises, 1977. 108 p. \$5.95

Written to help parents, teachers and other persons working with handicapped children, this book, to be used with adult supervision, provides interesting recipes in a picture format. SOURCE: H. and H. Enterprises, Inc., Box 1070, Lawrence, Kansas 66044

Ross Laboratories. Feeding the Disabled Person. Montreal: Ross Laboratories, 1980. 23 p. Free

Designed to supplement a slide-cassette program aimed at dietitians, this booklet provides the photographs and text in print form. The purpose of the program is to "present an overview of the nutritional and feeding problems of the physically and mentally disabled and to create an awareness of their general needs", and in this context, could serve as a useful introduction to the scope of this field to professionals other than dietitians.

The needs and rights of the handicapped are discussed in relation to the particular disabilities, physiological state, environmental living conditions and psycho-social factors. The evaluation of nutritional status and feeding problems is also covered and the final frames are devoted to assisting the dietitian in preparing to work with the disabled person. Two educational activities; case histories and a self-evaluation test, are included as supplementary material. Also provided are a current bibliography and an appendix of biochemical values. The slide-cassette program is available free on a loan basis from the address listed below.

SOURCE: Nutritional Services, Ross Laboratories, Division of Abbott Laboratories, Ltd., 5400 Cote de Liesse Road, Montreal, Quebec H4F 1A5 OR Your Ross representative.

Rusk, Howard, A., et al. A Manual for Training the Disabled Homemaker. New York, New York: University Medical Center, 1973. 167 p. \$3.50

This manual contains information for instructors responsible for planning and implementing programs for the disabled. Organizational procedures, physiology of disabilities and information on teaching living skills is provided.

SOURCE: The Institute of Rehabilitation Medicine, New York University Medical Center, 400 East 34th St., New York, N.Y. 10016

Saskatchewan Department of Health. Introducing Nutrition. 4 vol. Regina: Saskatchewan Department of Health, (197-?). various paging. Free

These four nutrition teaching guides (kindergarten to grade 3) were designed to provide teachers with a relevant health curriculum, innovative teaching techniques and resource material. Each unit of the separate volumes includes objectives, post-tests, pre-tests, teacher notes, resource materials, discussion ideas and suggested activities. The basic nutrition information provided in these volumes can be easily adapted for use with groups of disabled individuals.

SOURCE: Saskatchewan Department of Health, Wascana Office Building, 3475 Albert Street, Regina, Saskatchewan S4S 6X6

Simmons, James, Q. Nutrition and MS. New York: National Multiple Sclerosis Society, 1980. 16 p. Free

With the policy that, "... to date there is no scientific basis for a specific dietary recommendation, other than the well-balanced, varied diet...", the information presented in this booklet is on the various food groups and the recommendations of nutritionists. The dietary recommendations are intended to guide the individual to the highest level of general health attainable through nutrition. American Standards are used.

SOURCE: National Multiple Sclerosis Society, 205 East 42nd Street, New York, N.Y. 10017

Smith, Mary Ann Harvey, ed. Guides for Nutritional Assessment of the Mentally Retarded and the Developmentally Disabled. Memphis: University of Tennessee, 1976. 141 p. \$5.00

Proceedings of a national workshop on nutritional assessment for the retarded and developmentally disabled. The workshop had the objective to develop recommendations to promote the quality of nutrition services. Among the papers presented are the results of studies on anthropometric, clinical, biochemical, dietary and feeding assessment. The second section provides a summary of guidelines to be used. Throughout this publication, the team approach is stressed; nutrition, occupational therapy, physical therapy, dental hygiene and speech pathology are the areas to be considered in the over-all assessment. While this guide would be of greatest value to health professionals, it provides detailed background information and extensive references which would be useful to other professionals working in this area.
SOURCE: University of Tennessee, Child Development Center, 711 Jefferson Avenue, Memphis, Tennessee 38105

Smith, Patricia. Let's Cook and Teach Preschool Skills - Recipes for Very Young, Handicapped and Older Preschoolers. Seattle: Child Development and Mental Retardation Center, University of Washington, (197-?). \$1.60

A collection of recipes arranged in sections of teacher preparation and child participation. The skills required by the child are stated at the beginning of each recipe.
SOURCE: Child Development and Mental Retardation Center, University of Washington, Seattle, Washington 98195

Society for Nutrition Education. An Analysis of Selected Curriculum Guides Used for Nutrition Education in Grades K-12. Berkeley: Society for Nutrition Education, 1976. 67 p. \$4.25

A detailed analysis of various curriculum guides using pre-determined criteria. Content, concepts, goals or objectives, learning approaches and activities, social concerns, evaluation procedures, and general organization are evaluated.
SOURCE: Society for Nutrition Education, 2140 Shattuck Avenue, Suite 1110, Berkeley, Ca. 94704

Society for Nutrition Education. Preschool Nutrition Education Monograph. Berkeley: Society for Nutrition Education, 1978. 48 p. \$4.50

Contains a variety of selected articles useful for teachers, students, parents and others involved in nutrition education for preschoolers. Food habits, nutrient intake, preschool nutrition programs, parent education and daycare personnel training are among the areas covered. Reviews of audiovisual materials and an annotated bibliography are also included.

SOURCE: Society for Nutrition Education, 2140 Shattuck Avenue, Suite 1110, Berkeley, Ca. 94704

Toronto Board of Education. Family Studies Department. Food for All Tastes. Toronto: Toronto Board of Education, (197-?). \$11.00.

Outlines activities to teach multicultural food patterns, and includes a variety of recipes.

SOURCE: Family Studies Department, Toronto Board of Education, 155 College St., Toronto, Ontario M5T 1T6

Woodburn, Jane M., and Fitch Maeona, M. Feeding Programs and the Handicapped Child. Washington: Woodburn and Fitch, 1978. 26 p. \$4.00

A problem solving guide for food service administrators or other professionals who work with handicapped children. Covers eating problems, recommended foods, sample menus and feeding programs.

SOURCE: Woodburn and Fitch, P.O. Box 422, Bothell, Washington 98011

Yates, Jacqueline, J. Look and Cook. Seattle: Special Child Publications, 1972. 28 p. \$9.95

Designed to teach the mentally disabled how to cook, this poster-sized manual uses color codes and pictures to explain recipes for beverages, salads, sandwiches and quick meals. Includes a series of tear sheets for further instruction.

SOURCE: Special Child Publications, 4535 Union Bay Place, N.E. Seattle, Washington 98105

III. NUTRITION BIBLIOGRAPHIES AND INDEXES

Family Circle Magazine and Food Marketing Institute. Catalogue of Nutrition Education Material. The Family Circle, Inc., 1979. 20 p. Free

This compilation of nutrition and food teaching aids provides educators and community leaders with a selection of current materials. Entries are arranged by publisher and price and order information is included. Most of the materials were produced by food companies or marketing boards.

SOURCE: Family Circle, Inc., 488 Madison Avenue, New York, N.Y., 10022

Furse, Alison and Levine, Elyse. Food, Nutrition and the Disabled: An Annotated Bibliography. Toronto: Nutrition Information Service, 1981. 82 p. \$4.00 prepaid, \$4.95 to be invoiced

This current bibliography was produced with the aid of improving the knowledge of, and access to, information available on feeding techniques and adequate nutrition, and was undertaken in support of the theme of the International Year of Disabled Persons, 1981, "Full Participation and Equality." The selection of materials for inclusion was directed at assisting professionals and volunteers working with the disabled to understand the components of a nutritious diet, the feeding techniques associated with certain disabilities, and the necessity of, and methods for, educating the disabled person about proper nutrition. Listed are 374 books, booklets, periodical articles and audio-visual materials relating to both mental and physical handicaps. Ordering information is provided for all items except periodical articles and well known commercial publishers. In addition a listing of equipment suppliers and organizations for the disabled is provided.

SOURCE: Library Publications Office, Room L284, Ryerson Polytechnical Institute, 50 Gould Street, Toronto, Ontario, M5B 1E8

Goodwin, Mary, T. and Howard, Vera. Guide to Nutrition Information. Rockville, Maryland: Montgomery County Health Department, 1977. 18 p. Free.

Current and reliable nutrition information resources are listed alphabetically in this guide. A brief annotation is provided for each entry, and price information is given.

SOURCE: Montgomery County Health Department, Room 213, 611 Rockville Pike, Rockville, Maryland 20852.

Gordon, Kathleen, Chedu, Marilyn and MacDonald, Donna. Index of Free and Inexpensive Food and Nutrition Materials. Toronto: Nutrition Information Service, 1981. 269 p. \$10.00 prepaid, \$10.95 to be invoiced.

This annotated index provides source and availability information for over 2,000 free and inexpensive books, booklets, pamphlets and brochures relating to food and nutrition. The majority of materials listed were produced either in Canada or the United States and originate from governments, professional and trade associations, marketing boards and industry. The main section is divided into 24 sub-sections by subject, and title and subject indexes are included along with a source index providing the addresses of publishers. Price, paging and level of use are indicated for each entry. While some of the listed publications deal directly with the area of disability, others could be of value for use in nutrition programs for the disabled provided that level of use and professional supervision are accounted for.

SOURCE: Library Publications Office, Room L284, Ryerson Polytechnical Institute, 50 Gould Street, Toronto, Ontario, M5B 1E8.

Herr, Judith, Gifford, Judith, and Morse, Winifred. Selective Bibliography of Nutrition Education Materials for Preschool Instruction in Wisconsin. Menomonie, Wisconsin: University of Wisconsin-Stout, 1980. 14 p. Free

Designed to assist early childhood educators, nutrition educators, and foodservice personnel in selecting appropriate curriculum guides, audio visual materials, posters and pictures, cook books, manipulative materials and children's books, this guide provides an analysis of each item along with ordering information. Books have been classified as to level of difficulty and conceptual content.

SOURCE: Food and Nutrition Department, School of Home Economics, University of Wisconsin-Stout, Menomonie, WI. 54751

Hunt, Jennie, Nutrition - A Guide to Sources of Information. Bethesda, Maryland: National Library of Medicine, 1979. 10 p. Free

Prepared to introduce the reader to major sources of information in the field of nutrition, this selected annotated bibliography contains annotations of abstracts, indexes, bibliographies, major textbooks, journals, directories, dictionaries, encyclopediae, audiovisuals, and statistical guides.

SOURCE: National Library of Medicine, 8600 Rockville Pike, Bethesda, Maryland 20209

The Nutrition Foundation. Office of Education and Public Affairs. Index of Nutrition Education Materials. Washington: The Nutrition Foundation, 1977. 237 p. \$8.75.

An aid to nutrition educators and other professionals listing over 2,000 booklets, pamphlets and audio-visual aids available from over 400 government agencies, professional societies, trade associations and health and educational organizations and foundations. Arranged by subject, entries include readership level, publication information and single copy price. Source and subject indexes are provided. With proper supervision, the materials can be appropriate for use with certain groups of disabled individuals.

Ontario Ministry of Consumer and Commercial Relations. Consumer Information Center. Consumer Skills for Disadvantaged Adults: An Annotated Bibliography. Toronto: Ontario Ministry of Consumer and Commercial Relations, 1980. 99 p. \$2.00.

Materials suitable for teaching consumer skills to disadvantaged adults were selected from the Consumer Information Center resource collection for inclusion in this bibliography. The operational definition of "disadvantaged" used relates to age, income, language, handicap, race, geography, or culture. Included are books, kits, games, films, and other audio-visual material produced since 1970. Descriptions of various comprehensive teaching guides are also provided. This bibliography is useful for selection of educational material by both community workers and teachers. While some of the materials described were designed specifically for use with physically or mentally handicapped learners, many of those materials prepared for learners with other "disadvantages" can be adapted for use with the handicapped. SOURCE: Consumer Information Center, 55 Yonge Street, Toronto, Ontario. M7A 2H6

Ontario Ministry of Consumer and Commercial Relations. Guide to Consumer Education Materials. Toronto: Ontario Ministry of Consumer and Commercial Relations, 1978. 135 p. Free.

Print and non-print educational materials are listed under the broad categories of the economic system, decision-making, consumer motivation, money management, consumer rights and responsibilities, and teaching guides. Nutrition materials are included, and those listed could be appropriate for use with the disabled if adapted.

SOURCE: Consumer Information Center, 555 Yonge Street, Toronto, Ontario. M7A 2H6

Saskatchewan Department of Health. To Read or Not to Read ...
A Guide to Selecting Reliable Nutrition Books. Regina:
Saskatchewan Department of Health, 1980. 8 p. Free.

Presents criteria for choosing credible sources of nutrition information with an emphasis on the areas of physical activity, infant nutrition, vegetarianism and weight control.

SOURCE: Saskatchewan Health, 3475 Albert Street, Regina, Saskatchewan. S4S 6C6.

Society for Nutrition Education. Nutrition Information Resources for Professionals. Berkeley: Society for Nutrition Education, 1979. 15 p. \$1.00.

Guidelines for locating reliable information sources and evaluating educational materials are provided in this concise booklet. Nearly 100 entries provide information on organizations, reliable books, pamphlets, popular magazines, nutrition journals, and government and trade publications.

SOURCE: Society for Nutrition Education, 2140 Shattuck Avenue, Suite 1110, Berkeley, CA 94704.

United States Department of Agriculture. National Agricultural Library. Audio-visual Resources in Food and Nutrition. Phoenix, Arizona: Oryx Press, 1979. 232 p. \$13.45.

Over 1,200 audio-visual materials dealing with human nutrition research and education, food service management and food technology are annotated in this index. Title, author, publisher, place and date are given for each entry and author, title, subject and media format indexes are provided. Motion pictures, filmstrips, slides, audio cassettes, film loops, posters, charts, games and transparencies are included. This index is particularly useful for individuals involved in the selection of resources for nutrition education and many of the materials listed are appropriate or can be adapted for use with groups of disabled individuals.

SOURCE: Oryx Press, 2214 N. Central at Encanto, Phoenix, Arizona. 85004.

United States Department of Agriculture. National Agricultural Library. Food and Nutrition Bibliography. 10th ed. Phoenix, Arizona: Oryx Press, 1980. 345 p. \$13.45.

An annotated index to print and audio-visual materials in food, human nutrition, and food service management. Author, title, subject and media format indexes are included for easy access to the entries in the main section. The materials range from children's publications

to sophisticated professional information.

SOURCE: Oryx Press, 2214 N. Central at Encanto,
Phoenix, Arizona. 85004.

Wanzek, Carol, S. and Lindgren, Martha, J. The Chicago
Nutrition Association Publications List 1977.
Chicago: Kraft Inc., 1977. 136 p. \$2.00

This annotated bibliography of food and nutrition materials lists free and inexpensive publications available to professionals and consumers. Publications are entered by title, subject and source in three sections. May of the materials listed are suitable for use in nutrition education programs for the disabled, or could be adapted for individual purposes.

SOURCE: The Chicago Nutrition Association, 8158 South
Kedzie Avenue, Chicago, Illinois. 60652

Yost, Anna Cathry, Schroeder, Stella, L., Rainey, Carolyn. Home Economics Rehabilitation - A Selected Annotated
Bibliography. Columbia, Missouri, University of
Missouri, 1977. 107 p. \$1.50.

Intended to assist students studying physical or mental rehabilitation, this bibliography would also provide useful information for those working directly with groups of disabled individuals. Most of the material cited deals with rehabilitation for adults. Books, audio visuals, equipment and aids, dissertations, periodicals and catalogs are listed. Price and availability are noted for each item.

SOURCE: University of Missouri, Publications,
206 Whitten Hall, Columbia, Missouri 65201.

IV. RESOURCES AND ILLUSTRATIVE MATERIAL FROM "RESOURCE KIT ON FOOD AND NUTRITION FOR THE DISABLED"

- American Foundation for the Blind. Blindness and Diabetes. New York: American Foundation for the Blind, 1975. Booklet, 16 p., also available as soundsheet. Single copy free, 2-50 copies, \$0.30 each.
SOURCE: American Foundation for the Blind, 15 West 16th Street, New York, New York, 10011.
- The Arthritis Society. The Truth About Diet and Arthritis. Atlanta, Georgia: The Arthritis Foundation, 1980. 4 p. Free.
SOURCE: The Arthritis Society, 920 Yonge Street, Suite 420, Toronto, Ontario, M4W 3J7.
- Canada Department of National Health and Welfare. Bureau of Nutritional Sciences. Canada's Food Guide Handbook. Ottawa: Department of National Health and Welfare, 1979. 40 p. Free.
SOURCE: Information Directorate, Health and Welfare Canada, Brooke Claxton Building, Ottawa, Ontario, K1A 0K9
- Community Information Center. Information for the Physically Handicapped, 1978-79. Toronto: Community Information Center (1979?). 31 p. Free.
SOURCE: Community Information Center, 34 King Street E., 3rd floor, Toronto, Ontario, M5C 1E5
- Canadian Dairy Foods Service Bureau. Comparison Cards. Toronto: Dairy Bureau of Canada, 197-?). Set of 50 cards (8-1/2 X 11). \$2.50. (One card included in original kit).
SOURCE: Dairy Bureau of Canada, 20 Holly Street, Toronto, Ontario, M4S 2E6.
- Fremes, Ruth and Sabry, Zak. The Joy of Eating: A Guide to Better Nutrition. Waterloo, Ontario: Mutual Life of Canada, (1979?). 27 p. Free.
SOURCE: The Mutual Life Assurance Company of Canada, Waterloo, Ontario, N2J 4C5.
- Government of Canada. Fitness and Amateur Sport. Physical Activity and Weight Control. Ottawa: Supply and Services Canada, 1979. 10 p. Free.
SOURCE: Fitness and Amateur Sport, Journal Tower South, 365 Laurier Avenue West, Ottawa, Ontario, K1A 0X6
- National Dairy Council. Food Models. Illinois: National Dairy Council (197-?). 71 models, color. \$2.50. (One model included in original kit).
SOURCE: Dairy Bureau of Canada, 20 Holly Street, Toronto, Ontario, M4S 2E6

Ontario Heart Foundation. The Fitness Wheel. Ottawa: Canadian Heart Foundation, 1973. Free

SOURCE: Ontario Heart Foundation, 576 Church Street, Toronto, Ontario, M4Y 2S1 OR Contact your provincial Heart Foundation chapter.

Ontario Ministry of Culture and Recreation. Sport and Fitness Branch. Fitness and Nutrition - It's a Matter of Balance, 1980. 14 p. Out-of-print.

Ontario Ministry of Culture and Recreation. Sport and Fitness Branch. How Fit is Your Foodstyle? 1979. 14 p. Free.

SOURCE: Ontario Ministry of Culture and Recreation. Sport and Fitness Branch, 8th floor, 77 Bloor Street W., Toronto, Ontario, M7A 2R9

Ontario Ministry of Health. Easy Eating with Canada's Food Guide. Toronto: Ontario Ministry of Health, 1979. 6 p. Free

SOURCE: Ontario Ministry of Health, Communications Branch, 9th floor, Hepburn Block, Queen's Park, Toronto, Ontario, M7A 1S2

Ontario Ministry of Health. The Great Food Adventure. Toronto: Ontario Ministry of Health, 1981. 11 p. Free.

SOURCE: Ontario Ministry of Health, Communications Branch, 9th floor, Hepburn Block, Queen's Park, Toronto, Ontario, M7A 1S2

Ross Laboratories. Feeding the Disabled Person. Montreal: Ross Laboratories, 1980. 23 p. Free.

SOURCE: Nutritional Services, Ross Laboratories Ltd., 3400 Cote de Liesse Road, Montreal, Quebec, H4P 1A5 OR contact your Ross representative

Simmons, James, Q. Nutrition and MS. New York: National Multiple Sclerosis Society, 1980. 16 p. Free.

SOURCE: National Multiple Sclerosis Society, 205 East 42nd Street, New York, New York 10017.